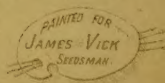


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WHITLAVIAS.





AUGUST, 1887.

FOR THE last forty years there have been no more prolific subjects for horticultural writers than the Peach yellows and the Pear blight. Within a few years past both of these affections have received close examination and study by scientific men, who, apparently have traced them through all their stages from first to last, and their causes have been determined, as we are told, and their treatment and prevention, as well as may be, prescribed. Notwithstanding this condition of things, these tree diseases are yet the theme of much writing, and it is evident the public are not wholly satisfied with the investigations that have so far been made. If these are yet open subjects then they should be taken in hand by the numerous Experiment Stations that are now in operation through the country, and a definite conclusion reached in regard to them, if finalities thereto are possible, which we do not doubt. The introduction of these subjects at this time is due to the statements of a correspondent of a late number of the *Gardeners' Monthly* and the remarks of Mr. MEEHAN, the editor. The correspondent, MAX, page 173, says that his "observation teaches that the fungus mycelium is always a concomitant" of the genuine "yellows." We quote the writer further: "Whether the fungus produces the disease, or *vice versa*, is difficult to

say. To be more exact, whether the disease may not simply furnish an agreeable state of affairs for the development of the fungus is a question." And again: "As to a remedy, I have never seen a tree benefited, much less cured, by any kind of treatment, after an attack of what we call yellows in Virginia."

In regard to the above, the editor, Mr. MEEHAN has little doubt in his own mind that the "disease is caused by the mycelium of a species of *Agaricus*—one of the Mushroom tribe." He further states that "precisely the same disease occurs in many trees, of which the Pines and Spruces afford notable examples—the White Pine particularly." Mr. M. says that "the exact species of *Agaricus* that does this has been determined," though he is not able to refer to it at the time of writing. He does not know that the fungus at the roots of a Peach tree in the early stages of the yellows is the "identical *Agaric* or not—the mycelium appears to be the same under a strong pocket lens—but when we see the exact appearance in so many other trees, and know that this fungus produces them, we may certainly, to say the least, grant the extreme probability of the same fungus producing it. The experiments of Professor PENHALLOW, and others, showing the deficiency of potash in the diseased wood, does not in the least militate

against this view, as the power to apply potash may have been affected by the diseased roots." Mr. M. concludes, "clearly, there is no reason why the mycelium of this Agaric is not the cause of disease—but many reasons why it may be."

In another place in the same number, page 183, the editor has occasion to refer to the same subject, and says "that the disease is confined to a certain latitude—that it does not exist in the Southern States," or, "that at least it is extremely rare there." Again: "The disease cannot be simply starvation, because there is as poor Peach land, and as much neglect of trees south as anywhere. And as we find a want of potash in trees, where the soil abounds in potash, the inference must be undeniable, that it is the vital power of the tree that is affected."

In order to clear this subject somewhat, Mr. MEEHAN's views may be stated briefly, as follows: 1st, A Peach tree diseased with the yellows has a deficiency of potash, while at the same time there may be potash in the soil in a form suitable to be appropriated by the tree. 2d, The deficiency of potash is due to the presence of the mycelium of an Agaric on the roots, which affect the vital power of the tree.

The writer does not wish to contest what are here considered facts nor the deductions made from them, but only to hold them up in somewhat different lights and notice their appearance.

As the mycelium spoken of is a parasite, obtaining its nourishment from the juices of its host, which is found to be deficient in potash, it is evident that this deficiency in potash is caused by the parasite especially appropriating the potash element and using it in its own structure. This is a straight forward statement, and that the fungus appropriates the potash element, sufficiently well accounts for the morbid condition of the tree without supposing any initial disease of the roots. As a matter of fact, the roots are active, doing their part, only with probably failing energy, to support the whole structure, while the robber fungus consumes the stores. In his diagnosis of this affection, Professor PENHALLOW says: "The roots are always healthy." Thus, though the parasite has fastened itself upon the roots, their func-

tion is least disturbed than are those of other parts. They are ready to gather the nutriment from the soil if it is there ready in sufficient quantity both for the tree and the fungus. For, though MAX says he has "never seen a tree benefited, much less cured, by any kind of treatment, after an attack of what we call yellows in Virginia," yet Professor PENHALLOW claims that the affected trees are cured by an application of potash. "One of the best evidences," says Professor PENHALLOW, in his writing on the Peach yellows, "of special exhaustion is to be found in the actual cures affected by the application of those elements supposed to be wanting to the diseased tree."

If it be true that affected trees can be cured by supplying the potash element to the soil, then the roots cannot be greatly diseased, but are ready for active service when there is a chance for doing it.

What appears a remarkable circumstance is the fact that a man like Professor PENHALLOW should make rigid examinations of all parts of diseased Peach trees without discovering this fungus mycelium, which is now said to be "always a concomitant" of affected trees. It also appears strange that the identity of this fungus with those of the Pines and Spruces should be in doubt, and especially so when we are informed that the fungus is an Agaric, one of the same genus as the common Mushroom. If the spawn form, or mycelium, is always on the roots of the diseased trees, it must be that the plant appears in its more perfect form as a Mushroom on the surface of the soil under the diseased trees. One would suppose that this fact would have been one of the first to be noticed by even casual observers, whereas it is now brought forward, after the most careful scientific examination has been made without noticing it.

It cannot be supposed that Mr. MEEHAN will leave this subject as at present, but will satisfy the public by identifying the Agaric and figuring and further describing it in his interesting periodical.

As to blighted Pear trees, we are informed by another correspondent of the same journal, page 206, of several cases that were restored to health by the use of wood ashes after they had become "badly blighted, apparently beyond re-

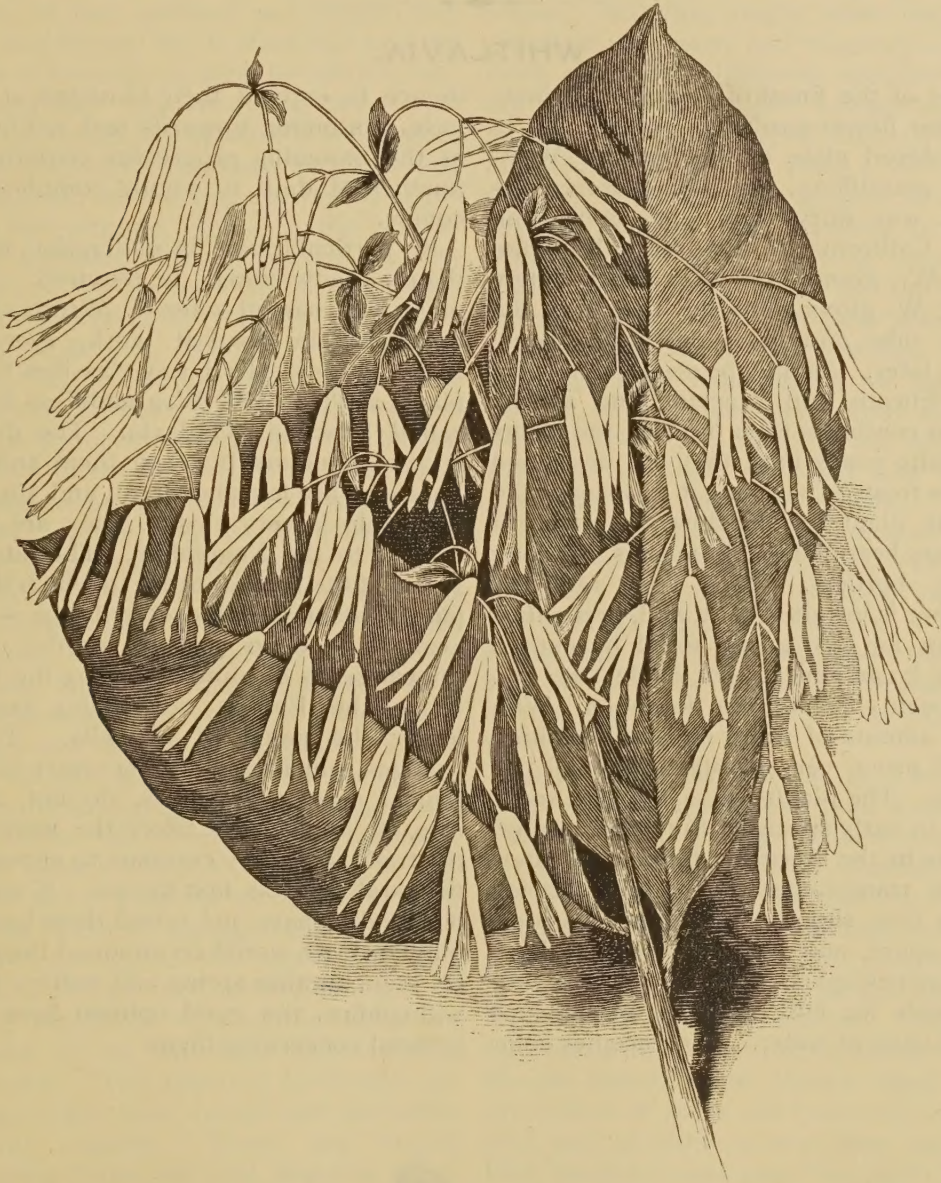
covery." So, it would appear that Professor BURRILL's bacteria, as well as the Peach Agaric, wants a potash diet. If the roots can supply enough of this element the trees can flourish.

A number of other interesting thoughts

are now suggested, but probably they may not prove of much value practically; and it is feared that Peach and Pear growers, though fortified plentifully with potash, will still find they have formidable difficulties to encounter.

THE WHITE FRINGE TREE.

A native shrub, or tree, of great value in ornamental planting, is the White Fringe, or *Chionanthus Virginica*. This subject oftener grows in shrub form than in tree form, and on our lawns is seldom seen much over eight feet in height. It has large, handsome, dark green leaves that make it a fine object through the summer, even



when not in bloom. But its crowning beauty is the mass of fleecy, snow-white flowers with which it is covered early in summer; these grow in immense numbers, overhanging each other in great profusion, so that the individual flowers are indistinguishable. A single thyrses of flowers, reduced in size, is shown in the engraving; but a meagre idea only can be gained from that of the bountiful display of bloom

which the plant presents. The petals are from an inch to an inch and a half in length. The name, *Chionanthus*, signifies snow flower, and is quite appropriate, though not more so than the common name, which alludes to the fringe-like petals that seem to be massed together.

This plant, though it cannot be said to be rare, is not common in our gardens, and perhaps never will be, as it is a slow grower. It is, however, very desirable, and a good specimen will always be a choice plant. It is, for the most part,

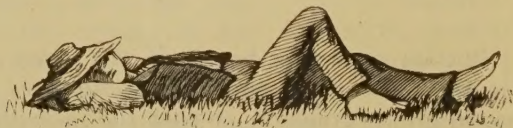
raised from seeds, which, however, are difficult to germinate, often remaining in the ground a year before starting. It is sometimes budded or grafted on the White Ash, to which it is closely related botanically; but from all the evidence to be gained, this union is not a very lasting one. It is said to be raised sometimes from cuttings. It is a hardy shrub in this locality, though probably not much farther north. In a wild state it grows on the banks of streams from Pennsylvania southward.

WHITLAVIA.

One of the finest of the annual plants for the flower-garden is represented in the colored plate of this month. *Whitlavia grandiflora*, the blue flowered variety, was introduced into cultivation from California, in 1854, and the white one, *W. grandiflora alba*, immediately after; *W. gloxinoides*, the one with the white tube and blue limb, came some years later. As may be seen, the flowers are delicate and graceful, and as the bloom continues from the time the plants are quite young until they are destroyed by the frosts of autumn, it is a most desirable plant for the flower garden. It appears best planted in masses, or along shady borders. Very hot and dry weather is unsuited to it, and, preferably, a place for it to grow should be chosen where it can have a light shade after ten or eleven o'clock in the forenoon. With a fair amount of water in such a position it will prove very satisfactory in all respects. The plants are raised from seeds sown in early spring in the open border, or else in the house or frame, and afterwards transplanted. As they branch much they should be allowed considerable space, and should be set at least nine inches apart. The flowers are very desirable for cutting, to be placed in a small vase of water. The racemes com-

mence to expand their blossoms at the base, continuing upwards and unfolding as the blooming progresses, requiring a number of days to wholly complete its course.

No particular care in cultivation, more than already stated, is required. The plant was named after F. WHITLAW, a botanist. In his last work, *Flora of North America*, Dr. GRAY classifies these plants as *Phacelias*—*W. grandiflora* being called *Phacelia Whitlavia*. The difference of structure between them and the *Phacelias* are few and slight, and the relationship is very close. They are also related to the *Nemophila*. The late revision of the natural order to which these plants belong—*Hydrophyllaceæ*—has also resulted in placing another well known genus of annuals among the *Phacelias*—the *Eutoca* now being ranged under the name of *Phacelia*. These changes, which become necessary as botanical science advances, do not, as a rule, for many years affect the names in the trade, and they continue to appear in the catalogues as first known. If any of our readers have not raised these beautiful plants, we would recommend them to try them another spring and believe they will confirm the good opinion here expressed concerning them.



NATIVE TREES OF CALIFORNIA.

Everybody has read about the "Big Trees" of California, viz., *Sequoia gigantea*, the Mammoth Redwood, found growing in groves upon the western slopes of the Sierra Nevada Mountains, at an altitude of from five thousand to nine thousand feet, these grow three hundred feet high and thirty feet in diameter. *Sequoia sempervirens*, the Coast Redwood, grows in real dense forests on slopes and in basins and canons nearer the level of the sea, and attain a height of two hundred and seventy-five feet, and twenty feet in diameter, and the value of these grand trees for lumber, etc., is very great. Few are aware, however, of the many kinds of magnificent native trees to be found growing, each in its chosen home, from the sea coast to twelve thousand feet altitude. These comprise singular varieties of Pine, Spruce, Fir, Cypress and Cedars, as well as many other attractive evergreen trees in variety, as Oaks, Madronas, Laurels, etc., beside many fine deciduous trees of peculiar grandeur and beauty. Many of these are of stately proportions, symmetrical habits, graceful forms, and might be cultivated in eastern parks, north and south with success, where they would stand unrivalled as princes among trees.

While California is comparatively an open country, and the forest area is small, still there are but few places where trees are not found growing either singly, as sentinels upon the hills and plains, or in groups and around openings, which convert valleys into parks, or along the banks of streams, or in the ravines and canons on otherwise barren mountain sides. The scenery of California is rendered most charming by this broadcast, various, Edenic arrangement of lavish nature's noble gifts—the native trees and plants and flowers of the Pacific slope.

The ubiquitous Oak claims attention because of its imperious and laudable presence. The Oaks of California are the grandest, most varied and attractive of any country. There are broad, spreading Oaks, tall and majestic Oaks, graceful drooping Oaks, rivals of the Sycamore, Maples and Elms in appearance.

Our beautiful Live Oaks are also as varied in habit as the deciduous. And all

these varieties and peculiar habits of growth of our splendid and wonderful Oaks go far toward making our scenery what it is. And they are, also, universally valued here for beauty, shade and fuel.

The Valley White Oaks, *Quercus Garryana* and *Q. lobata*, are grand trees over all the State. The leaves are small, not widely imbricated. On moist bottoms the limbs are even more drooping than the Elm, owing to length of growth each season. Standing singly, their majestic grandeur, symmetry and elegance are indeed charming. Different specimens of the same variety differ wonderfully in characteristics, and lend attractiveness equal to many sorts of trees in the East. On the uplands their growth is more rugged, gnarled and spreading in proportion. The heavy, draping, lace-like moss which hangs from the limbs in moist localities, adds a singular effect.

The White Oak of the mountain summits, *Quercus Douglasi*, is an upright grower, large, robust, gnarled and mossy; a noble tree. The timber is not equal to the eastern White Oak, but less brash than the White Oaks of the valley.

The principal deciduous mountain Oak is the so-called Black Oak, *Quercus Sonomensis*. It is found in all moist mountain districts, high and low, but is not a valley Oak. It closely resembles the Red and Yellow Oaks of the East in leaf and habits, but is a nobler tree in isolated places.

Right near our house is a choice grove of these grand old trees, which no woodman shall scourge while we remain in possession. The trunks measure, four feet from the ground, four and five feet in diameter. With heavy branches and far reaching limbs, covered with green moss and gray lichens, they are no less beautiful in winter than in summer. They afford shade and pleasure grounds for family and friends. The trunks stand like the pillars of some old Druidical cathedral, and, as within a sanctuary, one can here meditate near unto God, with worshipful emotions. As this beautiful Oak, scattered over our summits and spurs, bursts into leaf, the scene is like an immense orchard bursting into bloom. The tender shoots and leaves are like

crimson velvet to eye and touch, melting into shades of light gray and softest green.

All the Oaks of California afford rich

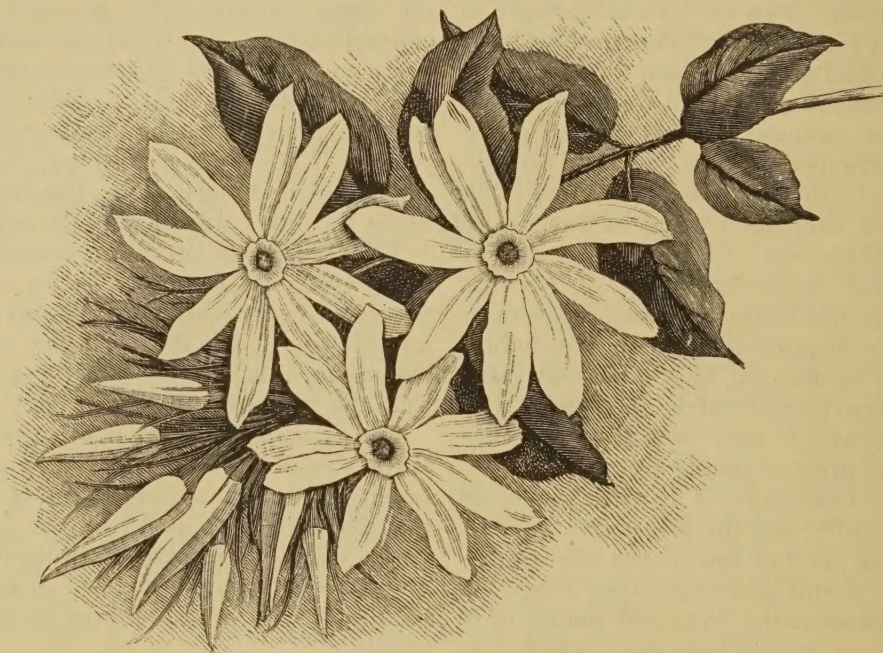
mast for domestic animals and deer. A description of the Live Oaks is deferred to another time, owing to length of article.

S. HARRIS HERRING.

JASMINUM GRACILLIMUM.

This, I trow, is a novelty not yet fully introduced, as I see it offered only in few catalogues; but I feel sure it will, as soon as known, command a wide and large sale, being so wonderfully lovely, both as a decorative pot plant and for cut-flower work, with this added recommendation of being a perpetual winter bloomer. Some six or eight years since I saw it

flowers, they being fully one and a half inches in diameter, furnished with nine petals of pure white, waxy texture, reminding one somewhat of our native Ox-eye Daisy, without the yellow centers. These flowers are formed in clusters, often as many as twelve to a cluster, and with nearly every twig of new growth furnished with a cluster each. As only



JASMINUM GRACILLIMUM.

first noticed, and then and there made up my mind that as soon as possible I would add it to my already choice collection of plants, and this resolve I succeeded in effecting last winter.

It embodies so much grace and delicacy, is so deliciously fragrant and exquisitely beautiful in flower that it commands instant attention, and once seeing, is admired, especially amongst the women-folks, who, we all know, appreciate and discriminate more correctly than do the "lords of creation," although "I say it, which ought not to do so."

Its leaf growth is scarcely distinguishable from the well known *Jasminum multiflorum*, but *J. gracillimum* has larger

the new shoots bear flowers, it is necessary, in order to obtain a good supply of them, to keep the plant in vigorous growth. I have five fine plants now well established in eight-inch pots, which, now, the 25th day of December, although in my thirty-five by fifteen-feet pit, heated only at night with two Florence oil stoves, are crowded with flower buds. And this fact goes to prove that, in the hands of professionals, it will bear out the truth of the assertion that has been made for it, that it is a perpetual winter bloomer. For cut-flower work, with its pure whiteness, fragrance and star-like beauty, what more can be desired? Mingle this with the delicate fronds of

the many varieties of the Maidenhair Ferns, *Adiantum cuneatum*, *A. Farleyensis* or *A. gracillimum*, with a Rose bud or two of any well known variety, and

note the result. I find that cuttings from the tender and new growth root easily if given bottom heat.

Mrs. J. S. R. T., *Spartanburg, S. C.*

SOME GOOD SHRUBS.

One of the best of all hardy shrubs is the Weigela. It is a wonderfully profuse bloomer. Indeed, so thickly are the flowers set along the stalks that the foliage is often half hidden by them. *W. candida* is pure white; *W. rosea* is a rich rose color. Plant these two together, and you have a charming contrast of color, and the effect is much better than where they are planted singly.

One of the finest of our iron-clad shrubs is *Pyrus Japonica*. It is very effective when planted by itself on the lawn, its rich, shining flowers looking like coals of fire when seen in the sunshine. It is also very fine when planted in front of evergreens, their somber color forming a good background for its vivid blossoms. The flowers are produced before the leaves are, and it is always best to plant these shrubs where they can have the benefit of a contrast with the green of some plant, to compensate for the lack of foliage on its own branches. The flowers are about as large as Apple blossoms and shaped very much like them, but they are a deep, intense, glowing scarlet. I do not recall the name of any other spring blooming shrub having flowers of such a brilliant color as this has. If you want a low, thick hedge, you can get no better plant. It is naturally bushy and compact, and will soon form a thick mass of branches, which will be covered with flowers in spring, and rich, dark green, shining foliage later on.

The *Deutzia* ought to be one of the best known of all shrubs, but there are many localities where it is wholly unknown. It has a great many points of merit, and not one objection can be brought up against it. It grows well, blooms with the greatest profusion, is perfectly hardy, and is so beautiful that whoever sees it will be sure to want a plant of it. The best known variety is *D. gracilis*, with single flowers of the purest white, borne in clusters of twenty to fifty at the extremity of each branch, and as each main branch has a score of

lesser branches the effect of a large specimen of this shrub when in full bloom, standing by itself on the lawn, can be imagined much better than it can be described. *D. crenata flore-pleno* has double white flowers, and is very beautiful, but I think the single variety, spoken of above, is the finest. This is an excellent shrub for cemetery use.

Another shrub especially valuable for use in the cemetery is *Hydrangea paniculata grandiflora*. The *Deutzia* blooms early in the season, while this one does not flower until very late; indeed, I do not think we have any shrub which blooms after it. It grows to be quite large, and requires but little training to make it into a fine bush, symmetrical throughout, with out-curving branches which will droop almost to the ground beneath their load of white flowers in the fall, unless some sort of central support is given them which will prevent the middle portion of the plant from bending out and resting upon the outer branches, weighing them down with a double burden. When the central branches are tied to a stake, and the others have only their own weight to hold up, you will have a shrub with a well rounded top, a mass of foliage and flowers from the ground up. It is a fine plant for any location, and no garden ought to be without at least one specimen of it.

The little *Daphne cneorum* is as charming as it is modest. It does not grow to be more than twelve or fifteen inches high, therefore it ought always to be planted in front rows, where it will not be hidden by taller-growing shrubs. Its place is properly close to the paths near the house, or in front of the sitting-room windows, where it can be seen at any time, for it is one of those companionable little plants which you feel so much at home with that you want to drop in on it in intervals of leisure, when you do not feel like making formal calls among the more dignified members of your garden. Its flowers are small, a bright pink in

color, borne in clusters on the ends of the branches, and exquisitely fragrant. Its proper season is in the spring, but it will afford a few flowers at intervals during summer. Get this plant and you will be delighted with it.

Another good old plant, but still not a common one, at least here in the west, is the *Syringa*. This is of more value for prominent locations where a large shrub is wanted than any of the others, as it often grows to be eight, ten and twelve feet high. It has flowers of pure white, freely produced, and they are most delightfully fragrant.

For a front place in the shrubbery border, you will find the *Spireas* well adapted. The flowers of these plants are small, but what they lack in size they make up for in quantity. They remind one very much of the Flowering Almond, which is seen in almost all gardens here at the west, bearing their flowers all along the slender branches, as that plant does; they are of the purest white. Unlike the Almond, this plant is a good grower, and it does not have to be coaxed and coddled.

All of these shrubs are hardy. If they were not I would not advise you to send for them, for I know only too well that you will not cover them when fall comes, and a half-hardy shrub can not stand our long, severe winters. Therefore the shrubs for the amateur should be those which are able to take care of themselves after a fashion during our winters. You will notice what I say about "after a fashion." By that I mean that these shrubs are sufficiently robust to survive our winters and give a crop of flowers each season without protection. But I

would advise you to give them some protection in the shape of coarse litter about the roots, if you want them to do their best. The hardiest of our plants are benefited by putting litter, leaves, Pine branches or straw about them in the fall. True, they will live without it, but without protection their vitality is so drawn upon that they come out in spring weakened to such an extent that they are not able to do as much as they would like to in the way of flowering. But, as I have said, the amateur will, nine times out of ten, forget or neglect to do any thing with his shrubs in the fall, and it therefore becomes necessary for him to grow only such kinds as can stand this forgetfulness or neglect.

To grow a shrub well, you ought to have the ground made thoroughly mellow to the depth of a foot at least, and a foot and a half is much better. Work in a good deal of well-rotted manure, and have the hole in which you plant it at least two feet across. Never let the grass encroach on this two feet plat assigned to the shrub as its especial property. The grass will soon choke it and starve it out unless you keep it away from the shrub. In pruning, be careful not to cut over shrubs in the fall whose buds are already formed for early flowering next spring. If you do, you destroy a large share of the crop of flowers. Only such shrubs should be pruned in the fall as produce their flowers next season on growth which they will make before their period of bloom begins. Those which bloom from buds which are formed the season before should be pruned in the spring or summer, after they have completed their flowering. E. E. REXFORD.

TRANSPLANTING.

It is not nature's design that a tree should be transplanted; the seed is sown, the tree springs up, and there it stands until age and decay bring it to the ground. The seeds are carried from place to place by the winds, the streams, the birds and animals, and if it finds a congenial spot it grows, and the tree is soon ready to do its share toward perpetuating its species.

Man is not satisfied with this slow and uncertain method of distribution. By

care and protection he propagates many plants where only a few, if any, would naturally grow. Then, to distribute the plants where he chooses to have them, he resorts to the process of transplanting, and it is only surprising that it can be carried on so successfully under all circumstances as it is.

A tree or shrub to be successfully transplanted must undergo a certain amount of preparation in the nursery or greenhouse. In nature the roots of the

tree continue pushing outwards in search of food and moisture, and become, after a few years, very long and widely extended, with the young or feeding roots at the extremities, so far away from the tree and so twisted among the stones in the soil and among the roots of other trees, that it is not possible to get them, and when the tree is dug nothing but stiff stubs, bare of fibers, are presented. A tree in this condition has little chance of living, for the fine fibrous or feeding roots are very necessary. They are obtained in the nursery by frequent removals or root prunings. When a root is cut off, it begins immediately to heal by forming granulations between the bark and wood; from these granulations spring numerous fine fibrous roots. In four or five years the stronger ones of these push off away from the tree, and must be again cut by pruning or transplanting to keep them within bounds. If the trees are carefully dug two or three years after this root-pruning process, it will be seen that all the fibrous roots will be obtained, as they do not extend far from the tree. Then, with proper care in after transplanting, success is certain. With more frequent transplanting and root-pruning the fibers will be made so numerous and closely packed that the soil will be retained among them, and the tree may be removed with a heavy ball of earth attached to the roots. This gives them protection from the action of the sun and drying winds, and makes success more certain than with such care as trees usually receive. A tree or shrub in this condition is much like a plant taken from a pot where it has been growing.

Healthy trees with good roots, if properly cared for after digging, and carefully planted in good soil, should always live, and where they do not their death can usually be traced to some preventable cause.

The chief cause of the death of trees and shrubs when dug in good condition, is exposure and drying after digging. The tree depends on the roots for its moisture and much of its food, and this is chiefly obtained through the delicate growing fibers. A moment's exposure to the burning sun or drying winds injures, and a longer exposure kills these feeders and injures the vitality of the larger roots.

The tree must then form new roots before it can make a growth. The greatest care should be taken that trees are properly protected and packed after digging.

Trees must have a good soil to grow in, as a rule. Certain varieties of trees seem well adapted to grow in the poorest soil, many others will occasionally become established in a poor soil and do well; but for success in ornamental tree planting, a good soil is necessary, and it should never be less than a foot deep. Do not plant trees where you would not attempt to plant a vegetable garden.

When a tree is to be planted, the hole should be large enough to extend the roots naturally in all directions. The soil should be worked among the roots thoroughly and very firmly. When growing, every fiber is in close contact with the soil, and the tree is held so firmly that the winds cannot stir it. In planting, if the earth should be packed solid enough to hold the tree secure it would certainly be an advantage.

Trees with heavy tops and small roots, especially evergreens, should be staked and tied until the growth of roots holds them securely in the ground. A mulching of coarse manure, hay or straw retains moisture and keeps the ground about the roots at an even temperature, and facilitates an early start into growth.

Shall I water my trees, is a question often asked by those about to plant. In very dry weather it would be best to water thoroughly; in wet weather it is not necessary. Frequently very cold water is poured about the roots to carry the soil among them. If this cannot be done with the hands and tools, a heavy watering would doubtless be an advantage in porous soils, where the ground would not be made soggy and cold thereby, a condition in which roots will not thrive.

In the greenhouse, a warm, moist soil is required to produce roots; if the ground is cold and filled with water the plants will not succeed, neither will they in the open air under the same conditions. When the trees are watered it should be done freely once in three or four days, if very dry, but do not give the ground a sprinkling every day, for this is worse than useless. In spite of watering, a tree will often wilt in dry weather. There is a constant evapora-

tion going on from the leaves and bark, and if the roots are not able to supply the moisture as fast as evaporated, then the leaves must wilt. For that reason the tops of trees are reduced when transplanted, by cutting off a part of the leaves, and for the same reason the leaves are stripped off when trees are transplanted in the fall; if they were allowed to remain the evaporation would still go on, with no supply, excepting the moisture in the tree to draw on. The consequence will be that the bark would shrivel, and the tree dry up in a very short time.

Covering shrubs with wet matting and wrapping the trunk and branches of trees in wet moss and straw, is practiced to advantage where there is a tendency to wilt, as it prevents the evaporation from the bark.

The question, when to plant, is an important one. Some will not plant any thing in the fall, others prefer the fall to all other seasons; the majority of planters will, perhaps, claim that spring is the best season, for the largest amount of planting is done at that time, and failure is not attributed so much to the season. Fall planting, however, has strong advocates among experienced tree planters, and where a planter has given that sea-

son a fair trial, his favorable testimony is, as a rule, secured. However, there is a prejudice against fall planting, and a single failure at that season counts more against it than a dozen in the spring. Trees and shrubs planted early in autumn will push roots before winter, for it is not necessary that the top grow to force root growth, all can prove this by observation. Take up a tree or shrub in November that was planted in August or September, and you will be surprised to see the amount of new and growing roots. A fall planted tree becomes established by this means, and naturally is in a better condition to grow the coming spring.

I believe if careful and systematic experiments were carried on in tree planting, the fall would be found a better season to plant than in spring; the ground is warm and moist, in the best condition for the formation of roots, the air is moist and there is not the fierce drying winds of early spring, or the liability of a June or July drouth soon after the tree is planted.

The experiences of planters who have given both seasons a fair trial through a course of years would certainly be of great value.

WARREN H. MANNING.

THE PARSNIP.

When well grown, the Parsnip is considered to be one of our most valuable and desirable garden vegetables, and it is to be regretted that so little care and attention has been bestowed upon it by our amateur cultivators, for it well deserves a place in all gardens, no matter how small.

It prefers a deep, moderately enriched sandy loam, one that has been well worked for a previous crop, although any other will answer if thoroughly and deeply plowed as early in the season as possible.

It is best to give a liberal dressing of decayed manure, and this should be well and deeply incorporated with the soil by means of the plow. A good harrowing should then be given, so as to level it off nicely, when it should be marked off into drills about two feet apart and an inch and a

half in depth. In these drills the seed should be sown rather thinly, and covered to the depth of about half an inch.

The seed should be sown early in the spring, just as soon as the ground can be properly prepared. As soon as the young plants are strong enough to handle they should be thinned out, so that they stand five or six inches apart, then a thorough hoeing should be given. After this all the attention they will require is to keep them well cultivated and free from weeds, and at each hoeing let a little fresh earth be drawn up around the plants.

As they are best after being touched by frost, it is customary to permit at least half of the crop to remain in the ground until toward spring, when it can be dug and used. The portion of the crop intended for winter use is dug in

November, the later the better, and stored in sand in a cool cellar.

The Long Smooth, or Hollow Crown, is the variety most generally grown, but the Student is, in my opinion, a much

better variety; but one will not go astray in selecting either of them.

An ounce of seed will sow one hundred and fifty feet of drill.

CHAS. E. PARNELL, *Queens, N. Y.*

THE MESSAGE OF THE FLOWERS.

O, Roses, blooming royally, you bring me, in your splendor,

A message of the summer-time—an idyl of the dew;
A glimpse of all things beautiful—a hint of all things tender,

A dream of all things wonderful, all fair, and sweet, and true.

And as your petals velvety are, one by one, unfolding,
So is a marvel wrought before our wonder-widened eyes;

For silently you demonstrate the beauty earth is holding,
Forecasting thus the glories in the realms of Paradise.

A message, too, is folded down within the Lily's chalice—

A message to the earnest heart of peace, and joy, and love;

A charge to rise above the world, its envy, war, and malice,

As the Lily grows away from earth toward the skies above.

Within the shadowed river-dell, across the misty meadows,

We catch the gleam of Milkweed bloom, the burning Card'nal blaze;

So, nature lights her torches bright, within the somber shadows;

So shines undimmed some spark of faith in life's beclouded days.

O, Roses, fling your petals down, 'tis not all wasted sweetness;

And, Lilies, lavish all your lives in sweetly od'rous breath;

So may ye tell the parable of life in its completeness,
The parable of life, and growth, of bloom, decay and death.

For never yet did garden flower or modest meadow beauty,

Arise and bloom but helped to spell upon the verdant sod,

A message to the hearts of men, of life, and love and duty,

A message sweet and merciful sent by the hand of God.

And never yet did man go search the flower pages over,

Or pry between the perfumed leaves like bee or humming bird,

But there he found the treasured sweets, and there he might discover

A message of the better life, though lacking voice and word.

DART FAIRTHORNE.

A BUNCH OF WILD FLOWERS.

In passing through a Clover field,
I cull a nosegay, wild and sweet,
Of flowers, wind-sown, at my feet—
Blooming among the meadow grass,
They nestle timid as I pass—
But gay as any lawn could yield.

Feathery sprays of Elder bloom,
And Daisies bright as stars of gold,
With Milkweed's pink and orange mold,

A head of Rye, a head of Wheat,
Some Clover blossoms pink and sweet,
I choose to deck my study room.

In passing through this life of ours,
We find our dullest days a-light
With blessings hidden half from sight.
Among the weeds of toil and strife
Are loving deeds that brighten life,
Scattered along our path like flowers.

NELLIE CHASE.



FOREIGN NOTES.

FRAGRANT CHRYSANTHEMUMS.

Different correspondents of the *Journal of Horticulture* are mentioning varieties of Chrysanthemums which possess fragrance. One writer remarks:

"As yet varieties of these flowers that possess fragrance are few in number, and it is a pity that more are not scented, as such an addition would add much to their worth as cut flowers when used for room decoration. The only fragrant sorts that I know are the undermentioned. The first position must be given to the single variety Mrs. Langtry, a pink shade of color; it possesses the fragrance of Violets in a marked manner, quite sufficient to perfume a whole house from a few plants placed therein; it is also free in flowering. Patience, another single variety, is scented, but in less degree. Progne and Dr. Sharpe, both reflexed varieties, are highly perfumed, the former bright amaranth in color, the latter magenta-crimson, is wonderfully free, making one of the best specimens of any section. These two if grown for their perfume alone should not be had in bloom early, as flowers produced from early crown buds are often deformed and rough in the petals; the color also is not so rich, nor is the fragrance so powerful as when terminal buds are selected. Dick Turpin, Anemone Pompon, bright magenta, with a yellow eye, is dwarf in growth, flowering freely, and possessing a powerful Violet fragrance."

Another correspondent writes that "Chrysanthemum Exquisite, a pure white single variety, sent out by Mr. T. S. WARE, this spring, is really fragrant and much sweeter than any Chrysanthemum I know."

A PARISIAN WEDDING CUSTOM.

The Paris correspondent of a London daily paper in referring to Floral Fashion remarks: "Parisian brides and bridesmaids do not take with them to church the lovely bunch of white flowers which tradition requires the bridegroom and his best men to supply; but it is inherent on the former to heap lovely blossoms in the

brougham that shall convey him and his newly-made wife back to the house of her parents after the ceremony. This is a very pretty fashion and deserves to be kept up. Much more beautiful than the circular and formally arranged bouquets, that used to be presented by the gentleman anxious to get into the good graces of his lady, are the rustic baskets of reeds filled with growing flowers decorated with bows of ribbon carefully chosen as to color. Long after the poor Roses or what not, subjected to the process of wiring, have faded and gone, the plants flourish—a pleasant feast for the eyes and a charming decoration for the drawing-room."

PARSNIPS FOR WINTER USE.

I raise Parsnips for our own use. I leave them in the ground as long as possible in the autumn, and have them dug just before the ground freezes up, and am very careful that they are not cut or broken, as they will soon decay if they are. Then they are stored carefully in a box or barrel in the cellar, filling this to within about nine inches of the top with the Parsnips. To keep them fresh no dirt or sand is used, but I fill up this space of nine inches with Potatoes, always being particular when any Parsnips are taken out to cover them again to this depth with the Potatoes, as the moisture in the Potatoes keeps the Parsnips from drying up. In this way they can be kept till late in the spring, and they can be used all winter, and they will be found to be sweeter and dryer than those that remain in the ground until spring. When first taken up they are not so sweet, but by the 1st of January they are very sweet, and we seldom use them until then. I think those who will try the experiment of taking them up in the autumn will never again leave them in the ground until spring. Instead of planting them in a bed, in rows, I plant them along the wide paths in my vegetable garden. The seed is sown about six inches from the edge of the path, afterwards thinning out the plants when the latter are large

enough. They make a fine bordering and add much to the looks of the garden. Here let me add also that the Fern-leaved Parsley makes a fine bordering plant to beds, and it grows most beautiful late in the season. I had about one hundred and fifty feet of it last season, and enough of Parsnips to make about six or seven bushels. As to the variety of Parsnips for planting I prefer Carter's New Maltese. It has a shorter root and is less trouble to dig than some others, and is of fine quality. It may be stated that all roots, Turnips, Carrots, Beets, etc., can be kept through the winter in the same way, that is, by being well covered with Potatoes. We always keep vegetables over in this way.

E. W. L., in *Horticultural Times*.

THE CALCEOLARIA.

Those of us who can look back over a period of but thirty years can contemplate with satisfaction the great improvement made in that time in this very showy greenhouse plant. It is not to be expected that improvement can go on so rapidly in the future as it has done in the past, nor does it seem to be necessary, as the standard of perfection has almost been attained. The plants now in cultivation are of dwarf, compact habit. The heads of bloom are very large, and the flowers possess the requisite properties of good form, size, richness and diversity of coloring. The set of twelve plants which was awarded the first prize at the Crystal Palace contained the best examples of culture ever seen in London. The individual specimens were of large size, and the well formed, richly colored flowers were two and one-half inches in diameter. One had flowers of a rich deep yellow, densely dotted and spotted cinnamon red; others yellow, blotched maroon; primrose, lightly spotted crimson; yellow, sparingly spotted with red; crimson-scarlet and yellow, self-colored flowers. How such handsome specimens are produced is a question many persons have asked. In the first place, a good strain of seeds must be obtained. Mr. JAMES has, by careful selection through a long series of years, brought the Calceolaria to its present state of excellence. He also has a thorough knowledge of the requirements of his plants. The seeds may be sown now or in June

and July; they are of very small size, and a packet obtained from the seed shops is so minute, that a careless person, in opening the packet, has jerked all the seeds out of it, and innocently insisted that it never contained any. A five-inch pot is the right size for an ordinary half-crown packet of seeds. The pot should be well drained and filled to within an inch of the rim with ordinary potting soil. The half inch on the top must be finished up with finely sifted sandy soil and made quite level; on this sow the seeds, and just sprinkle over them some fine sand. It is a good plan to lay a square of glass over the top to keep the soil in a moist condition, for if it should become over dry during the germination of the seeds, probably the whole of them would perish. I generally place the pot containing the seeds in a hand-glass or frame, on the north side of a wall or fence, to prevent any injury from the action of the sun. When the tiny seedlings are large enough to be pricked out, a dozen of them may be planted in a three-inch pot, and when the leaves of these pretty well cover the surface they may again be potted off, three into the same sized pot, to be again repotted with one in a pot. After this they grow very freely when the conditions are favorable to their perfect development; and those conditions are, first, good potting soil, composed of three parts good turfy loam, one part leaf-mold, one part decayed stable manure, and a little turfy peat. The plants must also be kept steadily growing in a greenhouse, kept close to the glass, and shaded lightly from the mid-day sun. The plants must be repotted before they become in the least root-bound. They like ample ventilation, but if the wind is high and dry the ventilators must not be opened on that side from which the wind blow, as a high, drying wind causes the leaves to flag as if the plants were suffering from want of water. This is another thing that must not happen, because a plant that suffers from over-dryness once will never make such a perfect specimen as if this had not taken place; but if this should occur more than once, the probability of successful results is very remote. Further, any plants that receive a check to their growth are almost sure to become infested with green-fly sooner than those that are kept in a healthy growing

state. In fact, it must be noted here that no plant is more liable to be attacked by green-fly, which would render the plants worthless if not constantly destroyed by fumigating with tobacco smoke. Besides the raising of plants from seeds, they can readily be propagated from rooted offsets. These are obtained by placing the plants when they are past flowering into a cool pit or frame; some good compost may be placed over the bare stems, and roots will speedily push out from the part of the stem nearest the leaves. Whenever these roots are formed the plants may be divided, and the small portions be repotted into three-inch or four-inch pots. At one time nearly all the plants grown in gardens were propagated in this way, but they are not so free in growth, nor do they make such handsome specimens as seedlings do.

J. DOUGLAS, in *The Garden*.

HARDY AZALEAS.

The *Journal of Horticulture* supplies a very excellent account of the origin of the beautiful varieties of hardy Azaleas, which are now receiving the attention of cultivators, both in Europe and this country. From that account we make the following extracts:

The hardy Azaleas cultivated in English gardens have originated from the Mediterranean Azalea pontica, the North American Azalea calendulacea, nudiflora, viscosa, occidentalis and speciosa, and the Chinese or Japanese Azalea sinensis or mollis. These have been much intercrossed, and the respective types are now connected by so many intermediate forms that it is not easy to classify them under their respective species. In the older forms the parentage can be more readily detected. All these species are extremely variable, frequently sporting, and by natural cross-fertilization they had yielded a number of varieties before they were taken in hand by hybridizers here.

They were first popularly known as American Azaleas, and subsequently, after they had received much attention in Belgium, and the number of forms had been artificially increased very largely, they became known as Ghent Azaleas, while now the progeny of *A. mollis* are commonly termed Japanese Azaleas, and a collective term for them is hardy hybrid Azaleas.

The European *A. pontica*, which is found in Turkey and the Levant, is a deciduous shrub with ovate ciliated leaves and yellow open shallow corollas, not unlike *Rhododendron ponticum*, but readily distinguished by the characters named. It does not appear to have been introduced to England so early as some of the American species, but it has produced a number of varieties ranging in color from pure white to dark coppery orange, and it has been useful in crossing with other species.

Of the American Azaleas, one of the first brought to this country was *A. nudiflora*, which, according to the elder AITON, was introduced by Mr. PETER COLLINSON, in 1734, and before the close of the century several varieties of it had been added to collections. The flowers vary in tint from white to blush, pink, rose, red and scarlet; they are tubular in shape, suggestive both in shape and fragrance of the Honeysuckle, under which name, with the prefix Wild or Upright, it is known in the United States. It is frequent in swampy districts in several States, and GRAY remarks that the varieties are numberless. This is a charming type, owing to the rich colors prevailing in the flowers, their powerful fragrance and the freedom with which they are produced before the leaves are fully expanded. It is also known as the May-flower in America, in allusion to the time at which it blooms. About fifty varieties have received botanical names and been admitted into authoritative works, and the characters of the respective species are well preserved throughout.

As the White Honeysuckle, another American species, *Azalea viscosa*, is familiarly known in its native home, where it is chiefly found in swamps near the coast in the Northern and Eastern States. This materially differs from the preceding (introduced at the same time) in producing its flowers when the leaves are fully expanded; and though the plant is beautiful it does not present such a mass of coloring as *A. nudiflora*. The shades, too, have not so wide a range, being confined to white or yellow with a rosy tinge, but the flowers are borne in large trusses, and are very fragrant.

The flame-colored Azalea, *A. calendulacea*, is of similar habit to *A. nudiflora*, but has larger, more open flowers, and of

yellow, orange or reddish hues. It is a native of woods and mountains in Pennsylvania, and from it has been obtained a large number of handsome varieties. *A. speciosa* and *A. occidentalis*, allied species, have also been concerned in the production of hardy varieties, but the foregoing are the principal types.

In 1867 an *Azalea* was introduced from Japan and named *A. mollis*; it attracted the attention of horticulturists on the Continent, and during the past twenty years many very handsome forms have been raised from it, surpassing all the others in the size of the flowers and trusses, but wanting fragrance, and the colors only consist of shades of yellow, orange, or reddish orange. They are, however, extremely handsome, very early, and especially useful on this account for forcing, as though hardy they are sometimes damaged by our late spring frosts.

The first systematic attempt on a large scale to improve these hardy *Azaleas* was made by Mr. GOWEN, at Highclere, the seat of the Earl of Carnarvon, and by 1831 about five hundred seedlings had been raised from various crosses between *nudiflora*, *pontica* and *calendulacea*. About four hundred seedlings were obtained from the plants fertilized with pollen from *A. pontica*, and it was observed that, curiously enough, three-fourths of of them closely resembled the latter in habit and foliage. From these thirty of the most distinct varieties were selected, named and described, giving a great impetus to the culture of hardy *Azaleas*. Several British nurserymen took them in hand, especially Mr. WATERER, of Kemp Hill, Woking; the Belgian growers rapidly increased the number of forms, and they became favorites in many gardens, a position from which they have partially declined, but to which they amply deserve to be restored.

LIQUID MANURE.

It is chiefly in the summer time when plants are in active growth that liquid manure is applied to them. It is a mistake to give plants that are not well rooted much of it, but when they have plenty of roots, and are growing freely everywhere, it is very beneficial; but as liquid manure is often a scarce and always a valuable commodity, it should be used in such a way as to secure the best possible return from it. In the case of plants in pots when they have many roots they are always apt to become quickly dry in hot weather, and many of them are often so dry that when the water is given them a large quantity of it passes through the soil and runs to waste. It is a mistake to allow manure water to be wasted in this way, as it does the plants little or no good. The most economical and advantageous way of applying it to all plants in pots is to make the soil and roots wet with clean water first, and then water with liquid, as the moist soil retains all the best properties of the manure, and this is the point to secure. This rule also holds good in the case of fruit trees of all kinds, and vegetables as well. CAMBRIAN, in *The Garden*.

DEATH OF GEORGE JACKMAN.

English journals announce the death of GEORGE JACKMAN, of Woking, on the 29th of last May. The *Gardeners' Chronicle* says: "Among horticulturists Mr. JACKMAN's memory will ever be associated with hybrid Clematises, to which he gave such close attention, and with such success. One of his productions—*C. Jackmanni*—is so well known that we need only mention it now. He will also be remembered by his valuable addition to gardening literature, *The Clematis as a Garden Flower*, which was the product of the joint labors of himself and the late THOMAS MOORE.



PLEASANT GOSSIP.

PINK FORGET-ME-NOT.

The interest I take in your valued MAGAZINE and in the good work you are doing for flower-culture throughout the United States, leads me to relate an incident which took place one bright afternoon early last May, in a Market Platz, in Berlin.

A party of Americans were walking through the avenues, admiring the rich and abundant display of flowers arranged in varied styles to tempt purchasers. Growing in odd little German pots was a new variety of *Myosotis*; the clusters of flowers were pink and blue, the combination of color was lovely. Being passionate lovers of flowers, and having a quick eye for novelties in Flora's domains, we halted before the little gem, and asked the merchant if we could buy seed of it. The German answered affirmatively, and disappeared behind a mass of beautiful Lilacs, Snowballs and Roses; finally, he reappeared with a box containing seeds of various flowers. Judge of our amazement when we saw "JAMES VICK, Rochester, New York," printed on each little package. It was a glad surprise to see the familiar name in a strange land, and to know that foreign flower-lovers were being helped by the industry and enterprise of American merchants.

In poor German we endeavored to express to the man the pleasure it afforded us to know that he appreciated our American seed, and that such lovely flowers had been raised from them. The incident gave the man as much enjoyment as it did us. He asked many questions about America, and seemed specially interested in our wild flowers and birds.

We failed to find among the seed he showed us the beautiful *Myosotis* which had so charmed us. We hope, however, for the sake of our own gardens, that the seed did come from VICK, and that in some bright spring-tide in the near future, we may be able to plant by our "ain fireside" this charming little Forget-me-not. MRS. C. M. T., *Munich, Bavaria.*

The variety, *Myosotis alpestris rosea*, corresponds to the pink flower here mentioned, and it is probable that two plants were growing together in the same pot, the pink one and another of the common blue, *M. alpestris*.

RETAINING SHIFTING SOIL.

I am requested by the Secretary of the Board of Water Commissioners to ask you a question.

The water reservoir is in a sandstone bluff, about three hundred feet high. The loose sand around it washes down continually. Can you recommend a grass or similar plant (not a noxious weed) that could be sown there so as to keep the sand in place, and also improve the appearance of the bluff? The plant must be hardy to withstand our severe winters. An early answer would greatly oblige.

MRS. S. J. W., *Red Wing, Minn.*

Probably the most promising grass to make trial of for this purpose is Beach Grass, or sometimes called Mat Grass

and Sea-sand Reed, the botanical name is *Calamagrostis arenaria*. It grows on the sands of the sea-side and the shores of the great lakes, including Lake Superior, three or four degrees north of Red Wing, where, therefore, it would be likely to be hardy. The roots of this grass are thick and strong, running along to the distance of twenty or thirty feet, and bearing along their course numerous small tubers, about the size of Peas. Its capacity to retard the moving of sand is wonderful, and it has been planted to great advantage for this purpose. It has been employed effectually on the sands at Lowell, Massachusetts, and other places on the Merrimac River. Provincetown, formerly Cape Cod, has received the greatest improvement by the planting of this grass, the work having been done, to a great extent, by appropriations by Congress for the improvement of the harbor, though the town itself has been very efficient, and spent a large amount in the same work. The grass roots can be planted in the fall or spring, in holes about a foot deep and two feet apart, and the growth will soon cover the ground. In France the common red Poppy has proved a valuable plant to hold sands on embankments, and it would be well to try it in this case, scattering the seeds or transplanting the young plants in the spring. It is not advised as a permanent improvement, but for service for one year, while the grass is getting rooted; the bloom will also be ornamental.

PARSNIPS FOR FATTENING HOGS.

I saw in one of your publications, the other day, quite a recommendation for the Parsnip as food to fatten hogs. Now, I have five acres of land adapted to the successful raising of Parsnips. I will be obliged if you will state the probable number of hogs I could fatten on the crop of five acres.

W. G., *Romeo, Mich.*

Although we cannot answer the above inquiry with the same directness that it is put, a few facts may be given that will at least partially satisfy the demand. Parsnip seed to germinate surely requires to be new, no vegetable seed quicker

losing vitality; hence, in order to ensure a full stand of plants, seed of the previous year's growth must be employed. If the land is suitable and well prepared five hundred bushels to the acre can be easily raised. Cattle and pigs are very fond of Parsnips, and fatten upon them readily, and are said to acquire from them great juiciness and delicacy of carcass. Horses eat Parsnips as readily as they do Carrots, and are equally well nourished by them. In the Island of Jersey, in 1834, a comparative trial was made in raising the Parsnip and the Altringham Carrot, and the same space of land that raised two hundred and sixty-one pounds of Carrots produced eight hundred and forty pounds of Parsnips.

In the south of England it is considered that the produce of thirty square rods of Parsnips is sufficient to fatten a thoroughly lean ox, three or four years old, in the course of three months.

If one has a rich, free, deep soil—not a poor clay with hard-pan bottom—he can profitably use it in raising Parsnips for feeding stock, if the conditions necessary for a good crop are observed.

POTATO ONIONS.

Will some one who has had the proper experience answer in a future number of the MAGAZINE, what is the proper time in the fall to plant the Potato Onion, and how deep to cover the bulbs with soil, and the best way to manure and protect them during the cold weather. MRS. J. A. C., *Fredericka, Del.*

We hope some of our readers at the south, who have had experience with fall planting of the Potato Onion will state it, giving all necessary details in regard to preparation of soil, planting and cultivation, noticing particularly the points inquired about above.

THE APPLE CROP.

The Department of Agriculture reports the prospects of the Apple crop as discouraging in almost every section, except New England and New York. This is a better statement of the case than the facts warrant, especially in regard to the western part of this State, which is really the larger producing area. The crop here will be light, only a few kinds bearing well, and they sorts that constitute but a small portion of the orchards. The Baldwin, the leading variety, is producing but very little—in most orchards not at all. It will be a short Apple year throughout the country

PARIS FLORAL LETTER.

The yearly Horticultural Exhibition was a great success notwithstanding the rain, and enormous price of entrance fee the first day (reduced upon the second); the horticultural pavilion was thronged with an admiring assembly. The Rhododendrons and Azaleas from Versailles were unusually beautiful, and were placed so



A BASKET OF ROSES.

that the tones of shades might harmonize. The French are gifted with taste, and understand how to make the combinations of colors effective, and it would seem that upon this occasion material was not lacking, for the smallest flowers, such as Pansies of a new tint called "*demi deuil*," ranged in masses, bordered with fragrant Mignonette and Pinks of variegated tints bordered with Heliotrope, from deepest purple to white, helped to bring out the effect desired, and leave no unpleasant background. *Coquelicots* (White Poppies), resembling sprites dressed in calico, regular chintz designs, seemingly were dancing with Corn flowers, the latter considered to be the Emperor of Germany's favorite flower, while scarlet Poppies waved gracefully their admiration of the floral revel.

Roses, ever the crowning feature of the yearly exhibition, were unusually beautiful, but after admiring the new varieties one turns over to the old favorites with new admiration and intensified affection. The little sketch here presented is of a very beautiful basket of Roses which was

very effective. The basket was made of silver and white cord, the handle of a sheaf of Wheat, upon the spray perched a white pigeon or dove; the bows of ribbon were of pink satin, and the Roses of three shades of red. The Jacqueminot and Prince de Rohan almost black red, with a few large Captain Christy. The contrast of the pink satin ribbon with the deep red of the Roses is a Parisian taste. Of all the floral decorations it certainly was the most admired.

The famous William Bennett Rose, evidently well known in America, as it was purchased from the English owner by an American for five thousand dollars, was classed under the head of new varieties.

The Battle of flowers, or the *Bataille des Dames*, Battle of Ladies, came off on Saturday, at the Bois de Boulogne. Pouring rain cast a mist of disappointment over the fête. As the French say when it rains upon this day, called the Fête of Flowers, there is a *crêpe* veil over the entertainment. From two until six the fête lasted. Private carriages laden with flowers and prettily dressed ladies drove gaily by, and at four the battle commenced. It consisted in pelting each other with flowers, of which many fell in the mud to be trampled upon by the crowd or picked up by little boys to be sold upon the street corners. The horses seemed to enjoy it, and with nosebags fastened to their heads and wreaths of Roses, they needed no spur of the whip, which was completely covered with flowers, to quicken their paces. It seemed as if the fairies were sending down Rose leaves from the clouds. The day is not distant when, in America, will be revived those old time customs, yet I wish for my flower friends a happier fate than the Battle of Flowers. ADA LOFTUS.

A GREAT HIVE OF HONEY.

According to the *Revue Horticole*, the French National Society of Acclimatation has lately published the following astonishing fact:

Dr. E. GUILMETH, during an exploration which he was making in Australian forests, in 1884, perceived, one day, at the summit of a Eucalyptus tree, which measured twenty-three feet (seven metres) in diameter, and three hundred and ninety-five feet (one hundred and twenty metres) in height, a sort of hut rounded at the top.

Almost immediately he noticed a multitude of black insects, which were flying and buzzing around this mass, in which he then recognized a hive of the black bees of Tasmania. After having felled the tree, the doctor extracted from the hive seven thousand seven hundred and sixteen pounds (three thousand five hundred kilogrammes) of honey, the empty hive still weighing about twenty-two hundred pounds (one thousand kilogrammes). This honey is said to possess some particular medicinal qualities

AN OFFER TO NEW SUBSCRIBERS.

In order to increase the usefulness of the MAGAZINE, we make the following offer to new subscribers:

For one dollar and twenty-five cents, the annual subscription price, we will send the remaining numbers of this year, commencing with either July or August, and the whole of 1888. Our friends will please show this offer to their neighbors, and interest them in beautifying their homes and grounds:

We are very sure that many will avail themselves of this offer if they learn of it, and it only needs that our readers should bring it to the attention of their friends, and express their own good opinion of the MAGAZINE. Please act at once, and do not postpone.

PYRETHRUM FOR ROSE BUGS.

According to the *Rural New-Yorker*, Persian Insect Powder, or Pyrethrum, is all that is to be desired for the purpose of destroying the rose-bug. The powder should be fine. Two table spoonsful can be wet up with waler into a paste, and then this should be stirred into two gallons of water and applied with an aquapult through a hose with a cyclone nozzle, which will deliver a mere vapory spray, reaching the surfaces of all the leaves.

THE BERRY HARVESTER.

The new implement that has been brought out for harvesting the Black Cap Raspberry, has been thoroughly tested this season, and proves a success in gathering berries for evaporating. The expense of gathering with the "harvester" is much less than by hand. Berries for table use still require to be hand picked.

ON AN OLD ROAD.

A host of Poppies, a flight of swallows;
A flurry of rain, and a wind that follows,
Shepherds the leaves in the sheltered hollows,
For the forest is shaken and thinned.

Over my head are the Firs for rafter;
The crows blow south, and my heart goes after;
I kiss my hand to the world with laughter—
Is it Aidenn or mystical Ind?

Oh, the whirl of the fields in the windy weather!
How the Barley breaks and blows together!
Oh, glad is the free bird afloat on the heather—
Oh, the whole world is glad of the wind!

CHAS. EDWIN MARKHAM, in *Scribner's Magazin*

RAISING SEEDLINGS.

Perhaps a few practical hints as to raising seedlings may be of service to the Nebraska lady, in the July number, and other amateurs who find this most fascinating part of garden work beset with difficulties rarely attended to by horticultural writers or florists in their cultural directions.

It is very well to "follow nature," in gardening, but nature does things on a large scale, scattering seeds in vast profusion to produce at most a few plants. It has never been observed that florists supply for our quarters this vast profusion of seed, and hence it behooves us to have a care to get the utmost possible results from our "packets." This is readily accomplished in the seed-frame, the most indispensable, economical and time-saving article in a garden. Four boards, say a foot wide, are nailed together at the corners, and sunk for half their depth in a warm, sheltered corner, where the sun has full play. The seed-bed is made up, as usual, with fine, not powdery, sandy soil, levelled off to same height as outside ground. If prepared early in the spring, a layer of half-rotted manure or leaves may be put under say three inches of soil, to furnish a medium of heat.

The best article for a covering is the cloth sold by florists, known as "shading," a heavy cloth treated with some oily preparation. In the absence of this, procure heavy cheese cloth, dip in hot, boiled linseed oil, wring out thoroughly and expose to sun to cure, as it will in a few days. This cover may be stretched tight over the frame by fastening curtain rings at intervals to be drawn over pegs or nails at the side, or preferably the two sides are nailed to wooden strips with

holes near either end to slip over nails on top of frame.

Our main supply of seed is sown in such a frame, usually by the 15th to 20th of April, neighborhood of New York city, and no distinction is made as to tenderness or hardness. The cover is put over, and a casual inspection only made to see that no stray worm or slug is abroad, until one sort after another the seedlings are ready for transplanting. The cover is kept on the frame during the daytime of the entire season, and thrown off at night only.

Experience shows that plants do not become drawn under this shading, and we have had no trouble with "damping off." With cotton cloth and glass, formerly used, we had much trouble with "drawing." During a spell of wet, cold weather, it is advisable to remove the shading and cover with slanted boards to prevent excessive moisture and packing of seed-bed and perhaps mold. Once started, such a frame is in constant use in a well conducted garden all the year, and is a storehouse from which may be drawn countless supplies, if, like the writer, one has a weakness for the acquisition of all the good things discoverable. Many things, like Gentians, Romnya, Coulteri and most perennials will lie dormant for months, and perhaps would never appear in the garden; but duly protected in the frame and undisturbed, will at last make an appearance. Less difficult seed germinate in such profusion that one soon has a garden filled to overflowing.

Transplanting is very rapidly done with the aid of an old-fashioned three-tined kitchen fork, a most useful tool, also, for loosening earth. Transplanting seems to be a terror to some, but it is the better way, for one never has the courage to thin out sufficiently. We only plant out in our cold clay soil surplus seeds, or those of a vigorous, pushing nature, for which we have no room in the frame. In fact, as our beds are never thoroughly spaded and not disturbed at all until late in the spring, after all chance seeds have had a chance to germinate, in this way we keep up our stock of hardy things and run no risk of disturbing bulbs, etc.; the frame is, practically, aside from economy, the most available place for planting. One glance at a frame assures one

or all being well or otherwise, and after one is accustomed to its use he has no patience to hunt around the garden twice a day to watch various little plants which, neglected a few hours, are ruined, and at last give slight results compared with the frame.

We find it a good idea to plant Asters and plants of that character, easily moved, in a special bed convenient to water, and all together, so that one glance shows if anything is amiss. A few hundred plants of this kind scattered over the garden in pairs and sixes, as is often done, will make garden life a burden.

G—.

MOON FLOWER.

In the July number, page 211, the question, "are the vines of the Moon Flower annuals, and what treatment to give them," prompts me to give my method of growing these lovely climbers.

This plant is *Ipomœa Bona-Nox*. It is a very rapid growing vine, suitable for trellis, veranda or arbor. Its flowers are pure white, five inches in diameter, opening in the evening after sun down, and remaining perfect until touched by the sun the next morning. They have a grand effect, and perfume a whole garden. Mine are grown each side of the hall door, carefully and continually trained and cared for, giving liquid manure twice a week and copious supplies of water every evening. They completely festoon the entire space, some two feet each side of the door, and reach more than half way up over a window, directly over this door. Here they are allowed to tangle and droop, making a dense mass graceful and lovely, having hundreds of blossoms open each evening. They need a stout, strong cord, as they get very heavy and do better with a firm support. The soil must be rich, that from an old hot-bed is best.

They have never matured seed for me, but just before frost my plants are cut back almost to a stump, lifted carefully and potted, given one watering and set aside in the greenhouse. They need a cool place just then, under the bench will answer if they can have light and air, afterward growing them on the bench, as on other plants.

The young shoots or spurs, those without buds are best treated as cuttings will

root readily in September, and if potted can be grown on in the greenhouse till February, when they can be tipped for cuttings, taking off the top of the plant some four or six inches long, and, by the time these are rooted, shoots will have started at the axils of the leaves on the plant cut from, and these can be used also as cuttings. After the old cut-back plant starts well, water must be given as necessary, but care must be used till it has once really started.

In spring, all the winter growth must be well cut back, as in the fall, and the plants carefully transplanted to the bed or border for another season of bloom and beauty.

My old plant is seven years old, and is a better bloomer than those grown from seed each season, for unless conditions are favorable to start seed in mid-winter they never bloom till very late fall, while the old cut-back plants do so as soon as new growth commences. IONE.

PLANT NOTES.

Scilla Siberica seeds freely and will germinate freely in an open border, at a temperature of 40° Fahrenheit, in presence of abundant moisture. They apparently need hard freezing and swelling to germinate. Seeds from the same lot would not germinate in a frame exposed to heat and moisture until they had been well frozen.

Poppies.—The Iceland Poppy, *Papaver nudicaule*, is one of the most satisfactory of hardy garden flowers. Blooming abundantly from earliest spring and continuing for months. The flowers are white, light yellow and deep orange. The full cluster of yellow stamens gives them a charming character. Plants are readily increased by seed.

The Marseilles Poppy has made a new break which bids fair to be very popular, and we have now a variety of entirely novel and striking appearance. This flower has numerous petals, white deeply indented or fringed and stained deeply on edges a bright carmine. With the light green seed-pod just showing in center the flower has a most unique and "Japaneque" effect. It has been introduced as the "Mikado." J. N. G.

APPLES AND PEARS are both a short crop in Ohio.

FRUIT EATING.

At the April meeting of the Columbus Horticultural Society, an address was delivered by Professor A. H. TUTTLE on "Fruit Eating for pleasure and profit," which contains so many good things that we here make some extracts from it:

There is a great deal of thinking and talking about health and diet that is at once foolish and hurtful; foolish because unnecessary, and hurtful because it at once springs from and strengthens two very pernicious hypotheses: one, that we are most of us in such wretched condition that we need constant tinkering, the other (and the worse) that we are the right ones to do the tinkering. When once these two notions get full possession of a man or woman, there is for that unhappy mortal little of pleasure or of profit either, worth the reckoning, in any thing in particular. Such lives degrade the lofty ideal of the inspired writer to the uttermost, for "whether they eat or drink, or whatever they do, they do it all for" — their self-medication. "It is healthy to do this;" "it isn't healthy to do that." Between such a morbid self-inspecting wretch who daily goes to the breakfast room and ingests two dried figs, five square inches of beefsteak (six would be an excess), a small baked Potato, a slice and a half of bread and one cup of coffee—with not too much sugar in it, not because of any desire for it, but from a sense of duty; and a man who goes to the table and eats a good hearty breakfast because he wants and likes it, there is all the difference between sanity and — well, unsoundness.

Fruits may be generally defined as consisting in part of cellulose, which form their frame work, is tasteless and indigestible, and affects the value of the fruit in proportion to its absence; of starches and sugars, which are foodstuffs in the common acceptance of the term, and whose presence in any large quantity converts the fruit in question into an ordinary article of diet rather than a luxury or a dainty; of juice, which is chiefly water, and which is therefore refreshing and grateful, though in so far as it is water not particularly nutritious or satisfying; and of flavor, which is resident in the juice, these two qualities, juiciness and flavor, deciding for most of us the value of the fruit in question.

The flavor is due to the presence of certain weak acids, known as the "fruity acids"—of which tartaric, citric and malic acids are familiar examples—they may be separated, and many of them may be artificially prepared—and of certain aromatic ethers, to which the delicate characteristic flavors of the various fruits are chiefly due. When these substances are taken into the body they undergo oxidation with a consequent tendency not yet clearly understood or explained, to lower the temperature of the blood, or rather to modify our temperature sensations, thus allaying any slight feverishness that may exist; and to excite to moderate activity the secretive organs. Fruits, therefore, are said to be in general, "cooling, aperient and grateful."

This is their more recondite physiological effect; their more evident one is no less important, they taste good, and this is no insignificant matter. The measure of our health may in some sense be defined as the balance between our pleasurable and unpleasant sensations. Every innocent bodily pleasure is in itself a good thing for the body in its direct physiological effect upon the nervous system. I know about these people who, when asked what is their favorite dish, reply "the one that is nearest;" who "don't care what they eat;" who "have something else to think of than victuals." I have met some of them; most of them I would rather board by the job than by the day. A healthy man eats or should eat for pleasure,—and so eating he finds his profit in it. The particular value of fruit in this respect lies in the fact that in proportion as the fruit is fruit, that is, is juicy and fine flavored, we get a maximum of palate gratification with a minimum of subsequent labor in the way of digestion.

There are a few hygienic considerations that are worth the mentioning before we leave our subject.

When ought we to eat fruit? is a question which many of you will first think of in this connection. To this I would answer that you ought to eat it when you eat other food. Perfectly ripe fruit, particularly the lighter and juicier kinds, is as easily digested as any other article of diet, more easily than most; nevertheless it is not wise to be constantly and frequently putting into the stomach food of any sort, even in small quantities.

Some of you will recall the test proposed by Dr. HOLMES for telling whether a person of uncertain age is a boy or a man; offer him confectionery half an hour before dinner time, if he eats freely of it he has not yet come to years of discretion, no matter what the calendar says. It is so with fruit as well. As regards the particular meal of the day, I have only to say that when fruit is taken before breakfast the cooling and aperient effect of which I have spoken is likely to be at its maximum; that fruit eaten after dinner adds largely to the pleasure of the palate, while adding but little to the tax upon the digestive apparatus at the time we are most most likely to sin against it; and that fruit is an excellent thing to take with lunch in the middle of the day on general principles. I need only add my conviction that if you from time to time find it desirable at an evening party or elsewhere, to partake of a late supper, an Orange, a Pear, or a cluster of Grapes will be far less likely to haunt your later slumbers than shrimp salad with mayonnaise dressing, or ice cream and meringues with cake and other sweetmeats.

"How much ought we to eat?" I think I hear some one ask. That, my friend, is a matter for your own conscience. You have—supposing you to be in anything near normal health—a physical conscience as well as a spiritual one. It tells you when you are really hungry and when you are not; what food really agrees with you and what does not; and most plainly of all, when you have eaten as much as you ought to. If you make a practice of heeding it, it will advise you with no uncertain sound. There is no advice for me to give you save this: "Stop when you have had enough," which is a very different thing from stopping when you cannot hold any more.

The question what kind of fruit to eat has already been discussed as far as any constitutional effect is concerned; if what I have said is true it is evident that the best kind to eat is the kind you like best provided you can get it; there are, however, a few considerations in this connection that I wish to submit in closing.

There may be temporary pleasure for some but there can be little profit for most of you in eating fruit that is not yet ripened. The compounds which in the purely ripened fruit become the very pro-

ducts that give it its greatest value are in the green fruit not only innutritious, but peculiarly indigestible; a provision of nature by which the brute is taught to leave the fruit until it is matured; while difficult of digestion they are quite prone to decomposition; and their fermentative changes in the alimentary canal give rise as we all know to frequent gastric and intestinal disorders, often of the most serious character. Though we may tamper frequently with unripe fruit without meeting the extreme punishment of our folly, we rarely, if ever, go scot free.

What is true of unripe fruit, is often more true of over ripe or wilted fruit. If it is folly to take into our bodies that which will readily decay or ferment, it is certainly as far from wise to take that in which these destructive changes have already begun.

And these considerations lead us naturally to the final one, in which I should enlarge at length if I had not so far taxed your time and patience, it is this: we shall find most pleasure and therefore most real profit as far as enjoyment is concerned, and that after all is what we eat fruit for, if we learn to make it our practice to eat the fruit that is in season. Our national spirit of unrest shows itself in this as in a hundred other ways, that we are very prone to be discontent with to-day and to be always desiring to-morrow; we try constantly to compel spring in winter and summer in spring. We pay fool's prices for small, sour, half-wilted Strawberries in March and April, to the end that we may completely pall our appetites before the sweet and luscious fruit of May and June may be had for the asking.

CELERY GROWING.

The most enterprising Celery growers have now abandoned the old method of planting in trenches, and plant on the surface of land that has been deeply plowed and thoroughly manured. The plants are set six inches apart in rows three feet apart, and the land is worked as for any other good crop by running the cultivator through it frequently, mellowing it and destroying the weeds, and keeping the plant growing thriftily. The planting season is from middle of June to middle of August. The dwarf varieties are the most valuable for this mode of treatment.

GARDEN AND ORCHARD NOTES.

Paragon Rhubarb.—This variety, introduced from England a few years ago, and advertised as a non-seeding kind, has seeded freely with me this year. It is short petioled, compared with Downing's Colossal, Linnæus and other well known sorts, and is decidedly less acid than they, but with a peculiar flat, "salvy" taste, which does not suit many palates.

The Brighton Grape.—In Northern Vermont and Canada only very early Grapes can be fully ripened. It is curious to notice the different order in which these early sorts ripen in different seasons. Some evidently require more heat than others, and the Brighton is one of these. A hot September will give us the Brighton ahead of every other sort, except the Tolman; but in a cool fall, like that of last year, the Brighton not only did not get ripe, but it remained perfectly green after Moore's Early, Hartford, Eumelan and Salem were quite eatable. But when we do get it, Brighton is our best Grape.

The Tolman Grape.—Undoubtedly the earliest, this Grape has received much abuse for its poor quality. It must, in fact, be classed as worthless for dessert, but it is an excellent culinary Grape, making a very fine, firm, high-colored and savory jelly suitable to serve with those meats for which fruit jellies are *en règle*.

Lime for Onion and Cabbage Maggots.—These insects, *Anthyoma ceparum* and *A. Brassicae*, produced from the eggs of a small fly, which are laid early in the season on or near the plant at the surface of the ground, have been excessively destructive, as is also *A. raphani* to the Radish and Turnip. A heavy dressing of unleached ashes, one inch deep all over the ground, is advised, and is usually successful as a preventive; but it is costly, and sometimes difficult or impossible to obtain. My experience, the present season, indicates that another alkali, air-slaked lime, thickly strewn along the rows of Onions, or around each Cabbage plant, arrests the operations of these maggots. One barrel of lime, reduced to powder by air-slaking, seems to have been perfectly successful on two thousand Cabbages; and applied to Onions at the rate of three barrels to

the acre, equally so on them. The lime is applied just before hoeing, and is worked well into the soil, close to the plants, with the hoe. The alkalinity communicated to the water of the soil in this way appears to be destructive to the maggots.

The Foundling Apple.—This Apple, though quite widely known, has never found much acceptance as a variety suitable for extensive cultivation as a market fruit. Yet the tree is thrifty and productive, and the fruit large and of fine quality, either for dessert or cooking. The flavor is high, with enough acid for piquancy. In Massachusetts, where it originated, it is a September and October Apple; but in Northern New England it keeps well into the winter. Very few, if any, true "iron-clad" Apples have ever been produced in New England, but the Foundling comes very close to one. It is decidedly more hardy against severe cold than Fameuse, but it needs to be top-grafted, as when worked low it is subject to bark-killing on the south-west side of the trunk, from sun-action in winter. It is quite a popular Apple in Central Vermont. Secretary GOODALE, of the Maine Board of Agriculture, an expert orchardist, says of it, (Maine Agricultural Report, 1872, page 412,) that it has "few if any superiors, either in quality, productiveness or hardiness." It is successfully grown in Lower Canada, according to the Montreal Horticultural Society's reports. DOWNING says of it: "Fruit above medium, roundish oblate, inclining to conic. Flesh yellow, tender, juicy, with a pleasant, rich, vinous aroma. Very good."

The Fourth of July Apple.—In looking up the Foundling, in DOWNING, I find this variety named next on the page, and on looking through the description I notice that he says of it, "In fruit this closely resembles Tetofsky," which is a surprising mistake for so careful an observer to make. This Apple is called "German" by Mr. D., it having been introduced to notice in this country by an Ohio German, C. F. JAEGER, of Columbus. But this also is a mistake, according to Professor BUDD, of Iowa, who regards it as a true Russian, and it certainly has all the marks of being so to me. DOWNING gives "Siberian August" as one of its synonyms. I think DOWNING'S

description was written from a Tetofsky specimen, as it agrees with that variety, but differs much from the true Fourth of July. The name exaggerates its earliness any where north of Pennsylvania or Southern Ohio. Though productive, pretty, and fairly good, it is rather small, and being close in season to Oldenburgh and other larger and better Apples, it might well be discarded. Its true description should be: Fruit medium or below, conical, even, dull light yellow, well striped with rosy red. Stalk medium, cavity medium, basin small, calyx closed. Flesh yellowish, firm, moderately juicy, mild sub-acid, with little flavor.

Strawberry Spinach. — Fifteen years ago, or more, a botanist, professionally equipped, called upon me, saying that "Indian Point, Lake Memphremagog," was given in the books as one of the few localities in New England where a plant known botanically as *Blitum capitatum* was to be found, and as he had been told that my farm was located on that Point, he hoped I might be able to help him to some specimens. From his description I was enabled to identify it with quite a common weed in my garden, which had interested me by its singularly beautiful, Strawberry-like fruits, and which was also regarded as a very early and excellent sort of "greens," under the name of "Strawberry Spinach." I had never looked it up in GRAY, but my caller quickly showed me in the *Manual* that this plant is really closely related to the foreign pot-herb, so extensively grown for market about our cities. The foliage is hastate, and much like Spinach, even to its "blistered" appearance, though this is not so marked as in the latter. The plant, if allowed to grow in good soil, is very luxuriant, and bravely producing many seed stems, around which, in the axils of the leaves, is produced its curious fruit in great abundance, making it really a strikingly interesting plant. My visitor got his specimens, but somehow I overlooked the matter, and soon it appeared that close hoeing had exterminated the plant, no specimens being seen for several years. Some three years ago a single one appeared and was allowed to mature. It made a great deal of seed, which ripened in the last half of June, and in July a dense crop of young plants

appeared where the seed fell. They grew finely and wintered well, and this fact (we cannot winter Spinach at all) led me to test it as a substitute. Finding it quite as good, I have allowed the plant to spread a little, and as it is so pretty it occurs to me to enclose some seed to VICK'S MAGAZINE. I think if the editor will plant them, potting off the young plants, and giving them a chance in a cool greenhouse, they will become, in early winter, a fine subject for a chromolithographic illustration.

T. H. HOSKINS, M. D., *Newport, Vt.*

MULCHING STRAWBERRIES.

At a meeting held by the members of the Miami County Horticultural Society, in June, the subject of mulching came up. Mr. LONGENECKER, of Dayton, recommended cut straw. Mr. KRUSCHKE, cornstalks. Mr. OHMER said: "I use clean straw, and have found that it makes berries brighter and they sell better in market. At Barnesville the expert growers spread well-rotted manure, from fifty to one hundred and fifty loads to the acre, every three or four years; mulching every fall with straw, do not cultivate before picking, but after picking cultivate thoroughly every year. And the berries they grow are marvels for size and productiveness. From the experience of growers there in fertilizing Crescents with large varieties, like the Sharpless, and from other experiments, he is convinced that a large staminate sort increases the size of the pistillate berry."

HE LOVES THE BRETHREN.

SAMUEL MILLER, who attended the meeting of the Missouri Horticultural Society, in June, says: "If any kind of society or creed can be got up that will organize such pleasant gatherings as the horticultural craft can, I want to know it, and will join at once." Of the gathering at that time, and an excursion the Society made, he remarks: "In all of which there was not a word of strife or contention, no drunkenness, nor any immorality, all peaceable, pleasant and happy. The whole affair reminded me of some religious meeting, and, indeed, I believe, there is some religion in horticulture, for it surely seems to make people better and happier." To all of which we can heartily respond, amen.

LOSS AND GAIN.

If the June Rose could guess
 Before the sunbeam wooed her from the bud,
 And reddened into life her faint young blood,
 What blight should fall upon her loveliness,
 What darkness of decay, what shroud of snow—
 Would the Rose ever blow?

If the wild lark could feel
 When first between two worlds he caroled clear,
 Voicing the ecstasy of either sphere,
 What apathy of song should o'er him steal,
 What broken accents and what faltering wing—
 Would the lark ever sing?

Alas, and yet alas,
 For glory of existence that shall pass!
 For pride of beauty and for strength of song!
 Yet were the untried life a deeper wrong.
 Better a single throb of being win,
 Than never to have been!

KATE PUTNAM OSGOOD, in *June Century*.

FLOWERS IN THE WINDY WEST.

I was much interested in the article on flowers in Nebraska in the July number, and thought I would tell you how I overcame the difficulty of raising seedlings. I could sympathize with the flower-growers in that windy country, for we of Eastern Oregon know what hot sun and hard wind can do with our tender seedlings.

In 1877 we began to improve our little home. I had brought a quantity of choice seeds from Wisconsin, our old home (the seeds originally purchased from JAMES VICK); my husband prepared the lawn and seeded it to Blue Grass, then he made two long flower beds into which I transplanted a few plants that I had brought such a long, dreary journey the summer before, and planted in a neighbor's fence corner, for want of a better place. Most of them lived, but, alas, for the seeds. Of the one hundred varieties I put out I had one Mignonette plant; it grew as no other Mignonette ever did before or since, trying, no doubt, to cover the vast expanse of nakedness on every side. My disappointment may be imagined by some flower-lover who has had a similar experience.

The next year I tried again, for, like SUSAN POWER, I said they "have got" to grow. This time I had better success, but scores of tender plants were killed by the wind, even after they were up and looking finely. But, if they could get their roots down far enough to reach moisture, they grew as I never had plants grow before.

By this time I thought I had tried enough experiments resulting in failures, so I had a frame made, much the same as for a hot-bed; but as I could not afford glass to cover it, I had a frame made on which I tacked house lining, this, being thin, admitted the sun and air minus hard winds, and made a good cover. I had the bed frame nearly filled with soil, and then I proceeded to the creek bottom, where I procured leaf-mold, which I spread thinly and evenly over the top to keep it from baking, and sowed my seed therein. It was a success; when the little plants were about an inch high, I raised the cover morning and evening, and closed it through the heat of the day and on windy days, never forgetting to sprinkle whenever the surface of the soil became dry, and by the time all danger of frost was past I had nice, stocky plants.

I was a little amused at your remark that a little shading such as small pieces of paper might afford would be sufficient when the transplanting was accomplished. O dear, where do you suppose those identical pieces of paper would be by the time your back was turned, if it should happen to blow as it can, and often does? I don't think you would ever see them again. I have found that a bunch of shingles for shading plants paid for themselves many times over, as they will last many years if taken care of when not in use.

Now, after ten years of success and failure, I have a fine flower garden; trees have taken the place of barren nakedness, and they also break the wind; fruit trees produce an abundance of luscious fruit. Sometime I may tell you of the fruits that thrive best here, if this prove interesting enough to find a place in our MAGAZINE.

A FLOWER-LOVER, of *Grande Ronde*.

[Let us hear about the fruits.—ED.]

CARE OF COLEUS.

In your next issue will you please give instructions for the care of Coleus plants.

MRS. E. C. C. S., *Readville, Mass.*

The Coleus is of the easiest culture. It needs a warm, moist atmosphere, and consequently frequently dies when kept in the winter in the living-room, or some part of the house where the heat is not sufficient, especially at night.

THE SMALL-LEAVED SYRINGA.

We here present an engraving of a small piece of branch of a beautiful little plant that is yet scarcely known to the gardening world. The plant is a native of California, grows only from nine to



PHILADELPHUS MICROPHYLLUS.

twelve inches in height, and proves quite hardy on our grounds. This is *Philadelphus microphyllus*. The leaves and flowers are represented full size in the cut. The flowers have the same fragrance as the Mock Orange. The plant is very bushy and compact, and is very handsome for the border. It appears to be a little gem that will yet receive much attention, and be widely distributed in cultivation.

It is so very dwarf that it may possibly prove to be a good edging plant for some places, and there is often a spot at the intersection of walks that a plant of this kind can fill.

MISTAKES OF ORCHARDISTS.

The last Transactions of the Maine State Pomological Society, contains a paper by D. P. TRUE, from which the following extracts are made:

One of the most common mistakes made by some of the best orchardists is in having too many varieties, making more work in harvesting and not so desirable. In some cases a number of varieties have been placed in one tree. This is one of the worst mistakes. Different locations require different varieties to get the best results. Big mistakes in the selection of varieties have been made. One of the great questions with the orchardist is, What is the most profitable variety to grow and meet the wants of the present and future market? Mistakes are quite common in the distance of planting out trees. This question is largely one of circumstances. If one has more land than money it may be best not to set so near. Where land is more costly, trees may be set twice as thick as needed, and when the trees cover the land one-half of them may be removed.

One of the saddest of mistakes is where one puts trees in old wornout grass fields and wholly neglects them and expects to raise an orchard. All such cases end in miserable failure. Another mistake is in placing mulch so near the trunk of a tree and in such quantity that it will heat and kill the tree. The writer can testify to the loss of fifty valuable trees killed in this way.

Losses may occur from mice and the borer. Some have had whole orchards destroyed by one or both of these enemies. Careful pruning is necessary, but some have made bad mistakes in this direction; the leaves are to the tree what the lungs are to the body. Extreme cutting should be avoided.

In grafting, orchards in some cases have been nearly ruined by sawing too large limbs or hubs, setting poor scions, grafting limbs in the center of the tree, using poor wax, neglecting to look after the scions after the work has been performed. These have been the cause of much damage. Turning sheep and lambs into a young orchard without taking the precaution to coat the trunks of the trees with manure, has caused a big loss in some cases. Oxen and large cattle have proved very fatal to young trees, when

turned into the orchard. Allowing trees to over-bear and break themselves down, is a mistake. Thin the fruit, but do not crop the limb.

If one has dwarf Pears, as the Quince root is fibrous, do not let the ground remain in grass; if you do you will make a mistake. Paying big prices for new varieties has in some cases proved a mistake.

COLD STORAGE OF APPLES.

Cold storage cellars, or refrigerating houses are coming to be an absolute necessity with our orchardists who are to make commercial Apple growing a business. When in Nova Scotia, two summers ago, I visited the great Apple storage house of KNILL & GRANT, built on the wharf of the Acadia Steamship Company—a building one hundred by one hundred and fifty feet, built of brick, and having a capacity for storing forty thousand barrels of Apples. The foundation wall was of stone, the cellar bottom being six feet below high water mark, the walls of the elevation being one foot in thickness. The bottom was very moist, a flooring of loose boards resting on joist four inches above the earth. The temperature of this house was kept throughout the winter at 35°. On June 5, 1884, Apples were re-packed in that house which had been in there for six months, with a loss of only two barrels in one hundred, and the Apples sold in Boston at \$5.00 per barrel. Mr. AUGUR, State Pomologist of Connecticut, says there are several retarding or refrigerating houses

in that State, used for the storage of Apples, and he strongly recommends the co-operative plan for their further erection among the fruit-growers of that State; say, forming a company for this purpose having a capital of \$2,000 in forty shares of fifty dollars each. Then let this cold storage house be built near to some business shipping point, and yet within easy reach of a considerable number of orchardists, who can avail themselves of its advantages for storing their Apples until the period arrives when they can sell them on the top of the market.

SAMUEL L. BOARDMAN,

Sec'y Maine State Pomological Society.

CELLAR FOR WINTERING PLANTS.

As our gardening becomes more enriched by the growth of sub-tropical plants of beauty and value, a frost-free, cool cellar is more and more used and needed as their winter resting place. Such a cellar should have light and means of free aeration, this latter being a necessity for all cellars under houses. Sometimes a white mold—a fungus—breeds in close rooms and attacks plants destructively. Sulphur, or carbolic acid in white-wash are effectual checks to it.

W.

THE AUGUST *Harper* has a timely article on "The Neighborhood of the International Park," at Niagara, by Miss WELCH, unfolding the unappreciated charms of natural beauty and historic association clustering around the cataract. All beautifully illustrated.



OUR YOUNG PEOPLE.

ALONE, UNDER THE STARS.

It was a June morning. The wayside fences were here and there gay with wild Roses, so were corners of the pastures and edges of the woodlands, over and across and into which leaped, ran, and then leisurely roamed in quest of game, two young hunters—cousins—enjoying their school vacation in alternate recreation and work. Before entering the woods, Julian had remarked:

"I must stop here, when we return, and gather some of these Elderberry blossoms for my mother; she says she wore them when she was married, in preference to Orange flowers. See how very delicate and perfect the creamy blooms are."

"Sure enough," returned Howard, "they *are* pretty, that's a fact. I never noticed the things before. You are always spying out some beauty or wonder in common things. But don't forget, we're after squirrels, just now, the woods are full of them." And on they hurried into the long stretch of open woodland. But Julian's glances were not all directed to the tree tops. A patch of flaming Indian Pinks, *Spigelia Marylandica*, caught his attention, and some well rooted ones had to be secured by him at once for the wild-flower-bed at home. While thus engaged, bang, bang, echoed and re-echoed among the trees, and Howard gaily shouted out from a little distance:

"See here, what a plump squirrel I've brought down; it's worth forty-'leven of your flowering weeds. Come on."

Thus rallied, Julian grasped his gun and resolutely set about to rival his cousin. But the gun-shot had frightened the shy fellows, and before they had ventured on another scamper Julian discovered in a sunny place some plants of Purple Bergamot, *Monarda fistulosa*. He had the crimson at home, but never before had seen the purple. So some roots of that had to be secured and carried back and placed beside the Indian Pinks.

(Ah, how clearly his cousin could re-

call the details the next day, and the next, and ever after.)

"My mother will be glad of these additions to our native flowers," he said, on returning.

"Yes," responded Howard, "Auntie is fond of cultivating plants and commenced early. Father says that when she was a wee toddler he saw her one day, stubbing along with a wash-basin of water, slopping to her toes at every step, till she reached a long, splintery strip from a board that she had stuck in the ground, and around which she poured the few remaining drops of water, calling out, gleefully, 'Me p'ant yose tree mese'f.'"

"She did commence early; I must tell her of that, to-night. And now for a squirrel—that is, if I'm ever to kill another one. Do you know, Howard, that each time I make a pretense of hunting I feel more and more repugnance to killing the innocent creatures. I've never shot one yet, except it was especially ordered for a sick person, that I did not regret, as I picked him up, that I'd blotted out so much innocent, frisky life. If they were necessary to us as food, it would be a different matter. I used to shoot birds, too—not the singing ones, of course—but you and I have quit that business. But look! see that saucy fellow's shining eyes peering around the limb, there, as if daring us to shoot. There, he's down, and you are welcome to him. There's a thousand times more fun in shooting at a target. I wouldn't mind killing a polecat, or a musk-rat, or a mad dog, or any thing that is a nuisance or a pest. But when it comes to these innocent beauties I can't even enjoy the pleasure of knowing I've made a good shot; and to-day I feel it more keenly than ever—so I'll quit. I know what the other boys would say to this kind of talk, but you, Howard, understand me like a brother, and I can talk to you as I feel. Look through the trees yonder; do you see that bank of Ferns? I'll go there while you're busy with your gun, and get some for mother.



When you're ready to return, you'll find me back yonder, where I left the other plants, and I'll take care of your squirrels meantime."

"All right," said Howard, "I'll try my luck a little longer, good or bad, and then we'll be off."

When the boys met again, Howard remembered that his father had asked him to return past the home of a laboring man and engage him for the coming week.

"Will you go around that way with me?" he asked, "or go on to our house and stop? I want to keep you there till morning."

"Neither one, thanks," Julian replied, "I and my plants here must be home, to-night. I shall strike directly across to the hills that overlook the village, and am not ready to start yet. Just as you came up a young chipmunk, snow-white, darted out of this hole and back again, like a flash. I'm going to secure him for a pet, if I can."

"Well, then, good-bye," answered

Howard, "I'll see you in the morning;" and he strode away, whistling a merry tune, little dreaming, alas! —

Meanwhile, down in the village, sat a pleasant-faced woman, glancing toward the street as three, four and five o'clock passed and brought home no Julian.

"The boys must be having rare sport, to-day," she thought. "How I wish he would ever take a luncheon when he goes off on such jaunts. I do not like such long fasts, when he is exercising, especially. How hungry he will be. I must have some favorite dish ready for him," and she bustled around, as mothers do when busy for those whom they love, with a happy smile on her face.

"How tall he looked, as he walked off, this morning," she thought, "and so manly, too—growing more and more like his father. The dear boy, how well I remember, when kneeling by his father's coffin, how he, a mere child, slipped in, and putting his arms about my neck, whispered, 'Don't cry, mama, I'm going

to take care of you the rest of the time.' And he seemed to remember it, and it has helped to make a man of him, until now he does take care of me, sure enough. How could I ever live without him! the dear, dear boy!"

Six o'clock—seven—and yet no Julian. But his mother is not uneasy; he and Howard being together, nothing could be amiss. If belated, he might stay with his cousin all night; he often did. The church-bell rang for prayer meeting; she would go, as usual. If he came in her absence he would understand, and would help himself to the waiting supper; and if he were absent till morning, it would be all right. A neighbor's windows were in speaking distance from her bed-room, and so her heart was all sweet content and peace, and trusting faith—not even the faintest shadow forecasting aught of ill to come.

The widow's first waking thoughts in the morning were of her son. "He will remember our plans for to-day, and come early," she thought, and hurried with her morning duties to be ready for him. Finally, it is eight o'clock, nine, half-past—and a tap on the door is quickly followed by the bounding step and cheery voice of Howard.

"Good morning, Auntie; where's Julian?"

There was a sudden pallor, a sense of suffocation and a gasping out of the words, "Didn't Julian stay with you, last night?"

Another pallid face was there, and quickened breath and sinking heart were in the answer, "No, I left him in the woods at three o'clock," and trembling with apprehension, he sprang forward just in time as his Aunt gave a piteous cry and fainted. Quickly calling her neighbor in to care for her, and saying, "Tell her I'll bring Julian back with me," he mounted his horse and sped to his father, who mounted another, and the twain were soon on the spot where the cousins had parted.

All traces of Julian had vanished; so leaving their horses, they started across toward the hills, and finally, scaling a fence, saw a sight that blanched their faces. A gun, a hat, a mass of withered plants lay near by, and just beyond, in

the blazing, pitiless sunlight, all that was left on earth of the widow's son. As they lifted him from the pool, where he lay, to the shade of a tree, a memorandum book with a pencil fell from his bosom, and in it was traced, in tremulous lines, growing more and more uncertain, his last words.

When, finally, his mother could be made to realize that a message from her son awaited her, this is what she read:

"It's no use trying longer, mother, dear, to drag myself nearer home. Have tried to staunch blood for your sake more than my own. Getting over fence gun slipped—ball inside the hip—limb nearly paralyzed or could do better.

"Later. Have called and called—no one can—soon be sun-down.—Think I must die here.—Very sorry, sorry for you, dear, sweet mother.—Don't grieve too much for me—don't, *don't* please. You mustn't let this spoil your life. Make your home at Uncle's—please do, *you must*.

"Give my books to Howard—and other things—you know what.

"Just heard Jim Woodrow calling cow. I called to him—too faint.

"Church-bell ringing—you'll go to prayer meeting.—Been thinking—am not afraid to die. It'll be nice and quiet here, alone, under the stars—shall like it so, only for you—but don't—.

"Must have fainted—saw my father—saw him smiling at me—I did, mother. This ought to comfort you—am going to him and to the Good Father of all.—I love Him best now—heart full of love to Him. This should reconcile you. Good-bye, mother, dear, I know we'll meet again.

"Once more. Tell Howard, squirrel came—looked at me—chattered—am sorry ever killed any. Stars coming out—still—quiet—happy. Good-bye."

It was many a long day ere Howard went gunning again, and nevermore had he the heart to shoot a squirrel. And whenever he was asked why he always cultivated Indian Pinks and Bergamot to the exclusion of other flowers, he only said, "I like them best." That was all. But his Aunt knew why, and loved him the more for his tender memories of one who had been to him as a brother, and who had thought it pleasant to die alone under the stars.

MARIA BARRETT BUTLER.



Insect Songs.

There are songs in the fields and songs in the trees,
Listen! they float on the soft summer breeze.
Some are songs of the day, and some of the night;
Each seems to come from a heart gay and light.

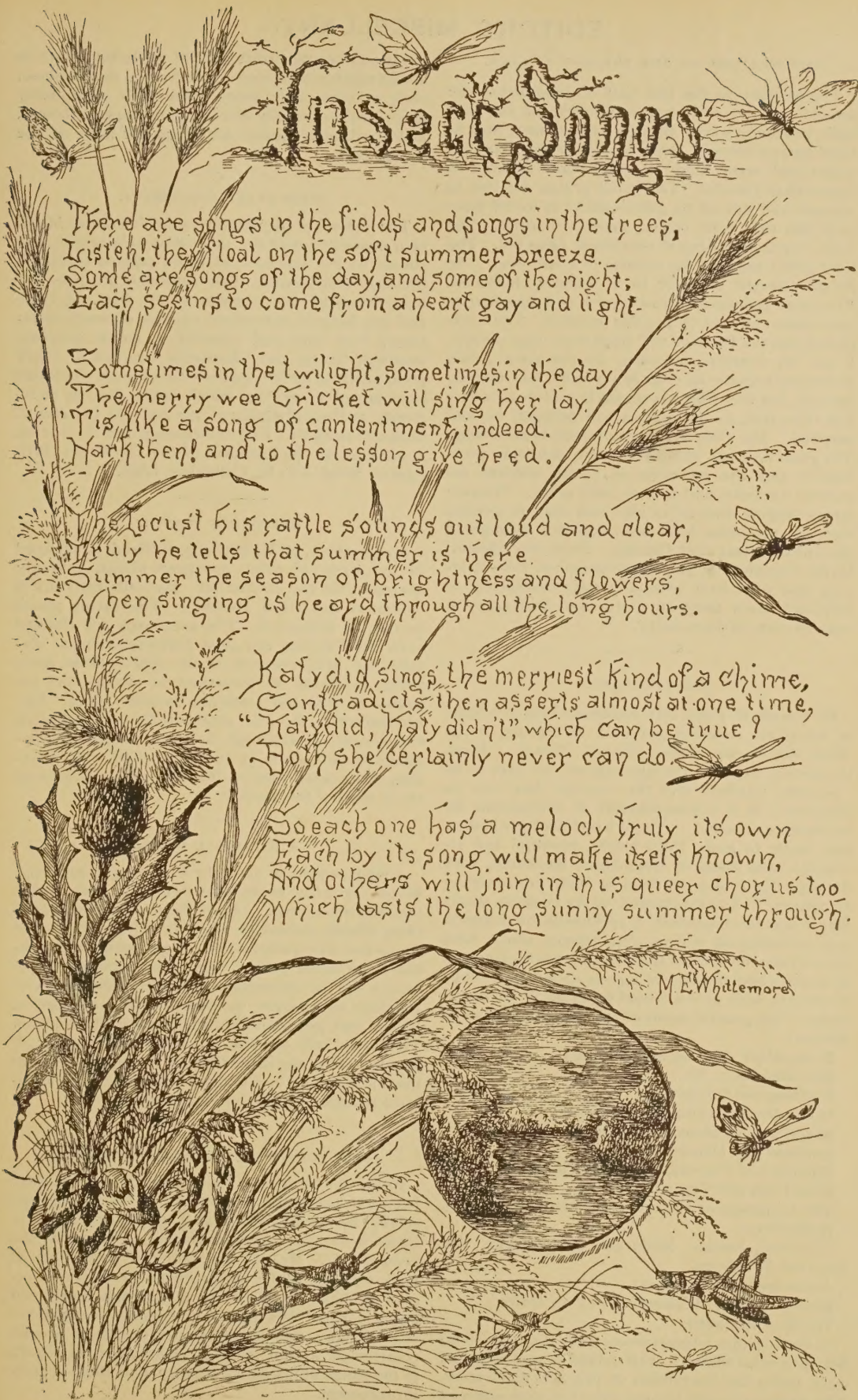
Sometimes in the twilight, sometimes in the day
The merry wee Cricket will sing her lay.
'Tis like a song of contentment, indeed.
Hark then! and to the lesson give heed.

The Locust his rattle sounds out loud and clear,
Truly he tells that summer is here.
Summer the season of brightness and flowers,
When singing is heard through all the long hours.

Katydid sings the merriest kind of a chime,
Contradicts then asserts almost at one time,
"Katydid, Katydidn't," which can be true?
Both she certainly never can do.

So each one has a melody truly its own
Each by its song will make itself known,
And others will join in this queer chorus too
Which lasts the long sunny summer through.

M. E. Whittemore.



EDITOR'S MISCELLANY.

THE WEATHER OF THE PRESENT SUMMER.

The weather of the last half of June and to the present time of writing, the twentieth of July, has been unusually warm all over the country, and in most parts a drought, more or less severe, has prevailed, and many kinds of crops have suffered to some extent thereby. The small grains are less in amount and not of so good quality as would have been the case with cooler, moister weather. The Corn crop is promising if seasonable rains fall. The total grain crop of the country is a fair one. The Potato harvest is likely to be greatly shortened. The total amount of Strawberries and Raspberries was much reduced by the dry weather. The prospect is that the Peaches will ripen early and rapidly, if the dry weather continues. In the great Peach producing regions the crop is reported less than an average, but this fruit has set fairly well everywhere it is cultivated, so the market will probably be well supplied. The Grape crop, at present, is promising. The great heat has resulted in many deaths by prostration, and the mortality of young children especially has been, and is now, very great. Temperatures ranging from 90° to 105°, and that for several days in succession, have been reported throughout the United States and Canada. From the fifteenth to the twentieth of July many storms of rain, lightning and wind have proved greatly destructive to buildings, trees, fences, orchards and field crops in various parts of the country.

THE ADUGRAPH.

Such is the title of a very handsome octavo volume of 650 pages, lately issued by J. B. Smiley, of 232 West Washington Street, Chicago, Illinois. From the preface we learn the meaning of the title to be "pleasant writing," and the contents bear out its propriety. It is a compendium of information for the makers of home. "To all who love their homes, and desire to make them bright, beautiful and attractive, this book is respectively dedicated, with the hope that it may aid them in their praiseworthy endeavors." An examination of its contents shows that it may be considered a cyclopedia of domestic arts, including as it does, departments which have been written by some of the best talent in the country. Its table of contents shows a great variety and range of subjects, such as the housekeeper needs to know. Some of the general heads of the departments are as follows:

- Embroidery, Netting and Tatting ;
- Macramé Lace, &c. ;
- Knitting and Crocheting ;
- Home Dress Making and Millinery ;
- Miscellaneous Home Decorations ;
- Amateur and Decorative Art ;
- The Care of Flowers, Flowering Plants and Ferns ;
- Wax Fruit and Paper Flowers ;
- The Language of Flowers and Colors ;
- Home Pets ;
- Collecting Insects, Birds and Bird's Eggs, and Practical Taxidermy ;
- Amusements and Games ;
- Poultry Raising, Beekeeping and the Dairy ;
- Practical Etiquette.

In each of these departments there is a large number of special subjects, with details so well supplied as to make the instruction of practical application. The writers are well known, practical authorities on

the specialties they treat on, and we believe it to be a most reliable collection of information for the home, such as every lady needs. The book is profusely illustrated, beautifully printed and elegantly bound, making it an ornament for the parlor table or the library case.

OHIO STATE UNIVERSITY.

The School of Agriculture and Veterinary Medicine connected with the Ohio State University, has claims to the attention of those parents seeking a practical education for their sons who are intended to be devoted to the pursuits of the farm. A large and able body of instructors, courses of study determined with care and experience, ample grounds, buildings, library and laboratories combine to afford great facilities for the acquirement of those particular branches of knowledge which relate, directly or remotely, to the cultivation of the soil and the care of domestic animals. Full information can be had on application to the President of the University, William H. Scott, LL. D., Columbus, Ohio.

HERBARIUM PLANTS.

M. Buysman, of Middleburg, Holland, is engaged in the issue of dried specimen plants, properly mounted, for the herbarium. He calls his work a "General Analytical Herbal." The useful plants occupy the first place. The specimens are claimed to be selected from the most perfect examples. Besides the dried portions of the plants, those parts which are fleshy are preserved in alcohol, and examples of fruit and seeds are carefully given. One can subscribe for and obtain medicinal, technical, commercial, agricultural, fodder, ornamental, interesting or rare plants, as may be desired. Mr. Buysman can be addressed on this subject as mentioned at the head of this notice.

A BOTANICAL WORK.

Announcement is made by Borntraeger Brothers, Berlin, Germany, of an important new work which they will soon issue. This is the *Conspectus of Vascular Plants*, containing all of the Flowering Plants, Ferns and Lycopods that had been known and published up to the end of 1885. The arrangement of genera will be according to Bentham and Hooker. Detailed information in regard to the number of species and geographical distribution will be given. This work will contain a considerable number of genera not known at the time of the writing of Bentham and Hooker's *Genera Plantarum*. Dr. Francisco Benecke, of Munich, is the author.

JAPAN PLANTS OF THE BERBERRY ORDER.

From our friend, the Japanese botanist, Tokutaro Ito, we acknowledge the receipt of his *Monograph of the Berberidaceous Plants of Japan*, printed in London for the Linnæan Society, in March of the present year. Mr. Ito has been for some time at Kew, assisting in the preparation of a flora of a region in Japan of which the monograph mentioned forms a part. His labors in botanical science are now of many years standing, and they have greatly contributed to the store of information in regard to the plants of his native country, and their orderly arrangement.